

EDUCATION OF TEACHERS IN INDIA

VOLUME - I

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S. N. MUKERJI

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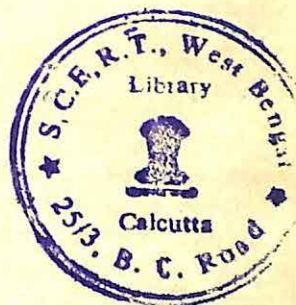
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EDUCATION
OF
TEACHERS IN INDIA

[VOLUME ONE]

Edited by
S. N. Mukerji

President

INDIAN ASSOCIATION OF TEACHER EDUCATORS



1968

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PREFACE

Even at the risk of being repetitive one must remember that it is on the quality of teachers that a country's citizenry primarily depends for excellence in all walks of life. The teacher not only transmits the set norms of a culture but in so doing he recreates, embellishes and improves them to a large extent. The refining quality of a teacher puts him in the category of a creator or a maker in the classical use of the term. In spite of his present diminutive role *vis-a-vis* politician it is towards the teacher that a society has to look up for moral upliftment and finesse in all their manifestations. India's long history is replete with exemplary teacher-scholars who spurned material benefits for the charms and allurements of their treatises and discoveries. Using the term teacher in its best sense, its illustrious lineage could be traced back to Rig-veda where God himself transmits knowledge through the heard word. If the passage of time has resulted in taking the edge off the keenness of wit and depth of scholarship from an average teacher's life and role, the all round mustiness of life is but a living testimony of the same. It is not for nothing that all advanced societies of today are showing awareness of this fact and are busy restoring at least a part of the grand stature a teacher enjoyed in the ancient days. Whether it was Plato or Aristotle, or Confucius or Shakyamuni the teacher was a visionary, a scholar and an interpreter of the past learning, all rolled into one.

Even if looking backwards has grown 'out of fashion' in the 'space age' the importance and education of the teacher could be reduced only at one's own national peril. We have seen that England, the United States of America and Soviet Russia, to take examples of only a few, have added a year or two to the teacher's professional preparation. The magnitude of the task of the welfare society warrants that a teacher be prepared more thoroughly professionally, for we can ill-afford to wait for the 'born' teachers to take over entirely. The education—especially the teaching skills and content knowledge of a teacher, could certainly be passed on to the ever-increasing ranks of teachers who could thus be made more professionally competent than hitherto has been the case. The sheer astronomical figures of teacher-hungry classes make one sit up and look at the problems involved in this child-teaching business. When a quarter of the total nation is busy either teaching or learning, when the demands of democracy are for ever making newer and greater challenges, the education of the teacher can be slackened or lowered down only at the risk of an incalculable loss to the humanity as a whole. The modern technocrat or a specialist has not only to be taught better but he has

to be, for the safety of the world, made into a better moral being. It is against this background one should look at the tremendous responsibility that a nation has to take into account while preparing this special class of important people.

Because of our recent past history—the role of the teacher has been sadly affected. It is time that we had better wake-up and accepted the challenge squarely. For let it be repeated here that we cannot afford to wait any longer for preparing our future teachers. The present volume and the one that will follow are but humble attempts at presenting the picture of teacher education as it is today. The links with the past have also been pointed out but unless we forge the past with the present and the present with the future we shall have failed in our role as teacher educators and betrayed the posterity from having their due. One only hopes that future will be better than the present, even as the present is from the past.

Let me place on record for my deep indebtedness to all individual scholars who spared their valuable time to make this first venture in the field into a reality. But for their concern for the welfare of their own community, I would not have succeeded in my self-elected task. I must also thank Dr. R. P. Singh for his singular devotion with which he assisted me in reading proofs and other attendant jobs. The index has also been prepared by him, a work for which he deserved special thanks.

Let this also be mentioned here that the proceeds of the sales will go to the Indian Association of Teacher Educators.

S.N. MUKERJI

CONTENTS

CHAPTER

Preface

1. **Origin and Development of Teacher Education in India** 1—40
Miss R. S. DEVI,
Reader, Central Institute of Education, Delhi.

PART ONE

The Training of Elementary Teachers

2. **Organisation of Elementary Teacher Training** 43—69
SRI H.B. MAJUMDAR,
Dy. Director of Education, West Bengal, Calcutta.
3. **The Training Course for Matriculates** 70—78
DR. SALAMAT ULLAH,
Principal, Teachers' Training College, Jamia Millia, Delhi.
4. **The Training Course for Middle-Pass Candidates** 79—88
DR. D.V. CHICKERMANE,
Director, G. K. Institute of Rural Education, Gargoti.
5. **The State Institutes of Education** 89—107
DR. C.S. SUBBA RAO,
Reader, Department of Teacher Education, N.C.E.R.T., New Delhi.
6. **In-Service Education** 108—126
DR. G.N. KAUL,
Reader, Department of Field Services, N.C.E.R.T., New Delhi.

PART TWO

The Training of Secondary Teachers

7. **The Training Institutions** 129—150
PROF. S.N. MUKERJI,
Dean of Studies,
National Institute of Education, N.C.E.R.T.,
New Delhi.
8. **Post-graduate Training and Research** 151—176
DR. N.P. PILLAI,
Dean, Faculty of Education, University of Kerala, Trivandrum.

CHAPTER

9. **The One-Year Training Course** 177—188
SRI V.S. MATHUR,
Principal, Government Post-Graduate Basic Training College,
Chandigarh.
10. **B.Ed. Course Through Correspondence** 189—194
DR. R.N. MEHROTRA,
Reader, Central Institute of Education, Delhi.
11. **Post-graduate Diploma in Basic Education** 195—222
DR. J.C. BANERJI,
Principal, Basic Training College, Kakraban (Tripura).
12. **The Four-Year Degree Course in Education** 223—247
SRI A.C. DEVE GOWDA,
Former Director of Public Instruction, Mysore State.
13. **The Training of Teachers for Practical Streams** 248—258
SRI J.K. SHUKLA,
Head, Department of Teacher Education, N.C.E.R.T.,
New Delhi.
14. **The Training of Under-Graduate and Matriculate Teachers** 259—269
DR. R.P. SINGH,
Reader, Department of Foundations of Education, N.C.E.R.T.,
New Delhi.
15. **In-service Education** 270—285
DR. M.B. BUCH,
Head, Department of Field Services, N.C.E.R.T., New Delhi.

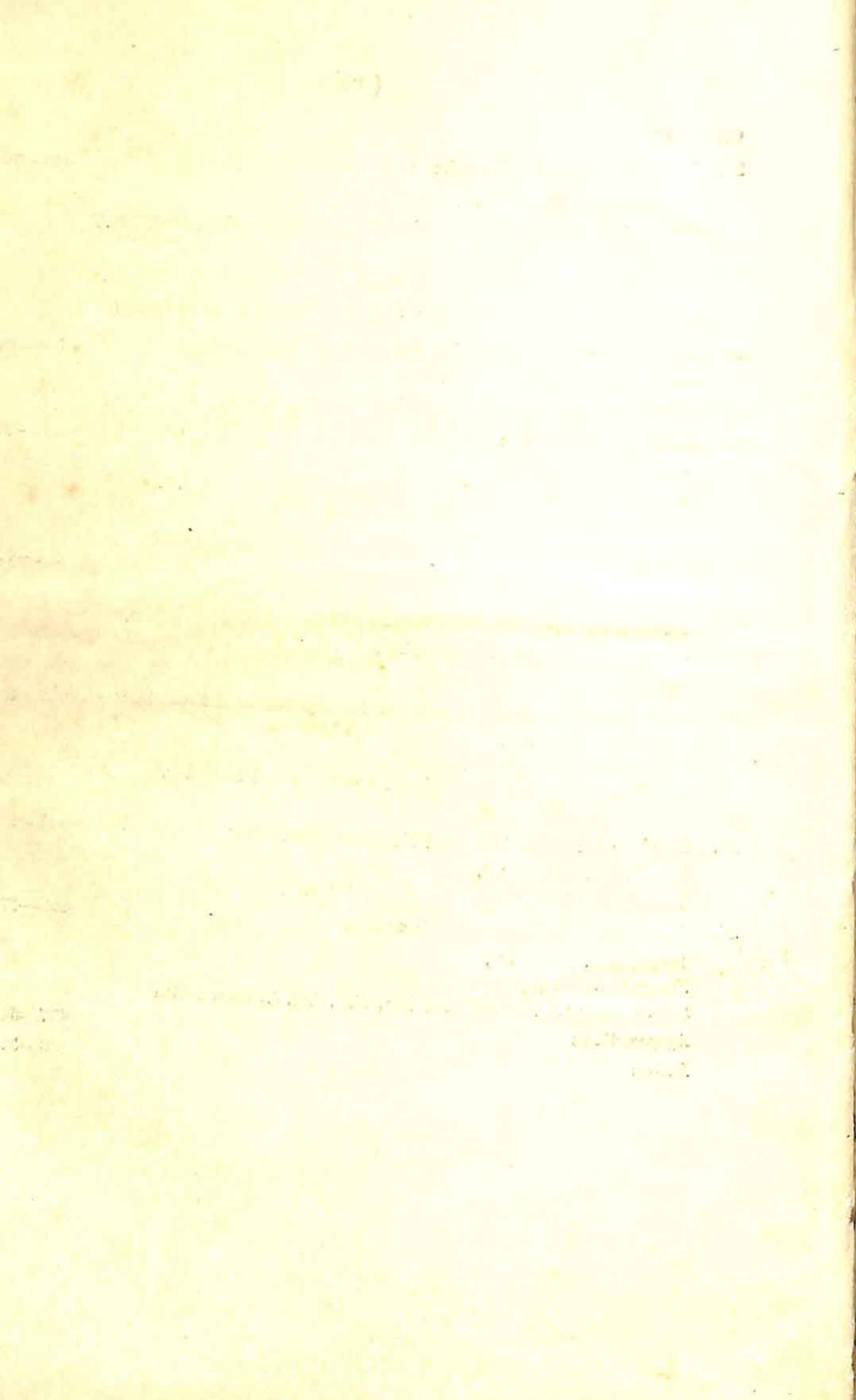
PART THREE

Special Branches and Organisations

16. **Pre-primary Teacher Education** 289—306
DR. (MRS.) R. MURLIDHARAN,
Reader, Child Study Unit, N.C.E.R.T., New Delhi.
17. **Physical Education** 307—311
SRI P.M. JOSEPH,
Principal, Lakshmibai College of Physical Education,
Gwalior.
18. **Training of Guidance Personnel** 312—325
SRI R.N. MAGO,
Councillor, Central Bureau of Educational and Vocational
Guidance, N.C.E.R.T., New Delhi.
19. **A Teacher Training Programme for the Teachers of English** 326—347
PROF. V.K. GOKAK,
Vice-Chancellor, University of Bangalore, Bangalore.

CHAPTER

20. Training of Hindi Teachers	348—361
A. SRI A. VIDYALANKAR, Reader, Department of Curriculum and Evaluation, N.C.E.R.T., New Delhi.	
B. SMT. P. LAKSHMIKUTY AMMA, Principal, Government Training College, Trichur (Kerala)	
21. Training of Teachers for Other Indian Languages	362—372
LATE SRI P.D. MUDALIAR, Principal, Dr. Algappa Chettiar Training College, Karaikudi	
22. Science Education	373—399
SRI N.K. SANYAL, Reader, Department of Science Education, N.C.E.R.T., New Delhi.	
23. Professional Preparation of Teacher Educators and Educational Administrators	401—422
PROF. S.N. MUKERJI, Dean of Studies, National Institute of Education, Mehrauli Road, New Delhi.	
24. National Council of Educational Research and Training	423—439
MRS. MURIEL WASI, Officer on Special Duty, National Council of Educational Research and Training, New Delhi.	
25. The Indian Association of Teacher Educators	441—454
SHRI V. G. JHIRGRAN, Principal, Dharma Samaj College, Aligarh.	
26. Challenges to Teacher Education	455—476
PROF. S.N. MUKERJI, Dean of Studies National Institute of Education, N.C.E.R.T., New Delhi	
Appendices	477—548
Index	549—553



EDUCATION OF TEACHERS IN INDIA

ORIGIN AND DEVELOPMENT OF TEACHER EDUCATION IN INDIA

The professional education of teachers in India has not been a static but an evolutionary process. It has a hoary tradition. The system has grown gradually but not suddenly and today it is faced with a number of complex problems. This chapter gives a bird's eye-view of the salient advances in the Education of Teachers in this country. This will enable readers to understand easily the trends in other chapters of this book.

EDUCATION OF TEACHERS IN INDIA

REPORT AND DEVELOPMENT OF TEACHER
EDUCATION IN INDIA

ORIGIN AND DEVELOPMENT OF TEACHER EDUCATION IN INDIA

R. S. Devi

THE EARLY PERIOD

Teaching is the oldest, most indispensable and inevitable of all the professions in the world. No individual can help being a teacher to his fellow-members, if he is a member of any group. No group has ever come together, but has made some provision to pass on the social heritage and train the young for future leadership. Not satisfied with such informal arrangements, teaching has been the first area of specialisation in every tribe and community. Priesthood, which everywhere arrogated to itself the monopoly of teaching, has always been the first social class to separate itself from the "common mould", requiring its members to gain special knowledge, learn special skills and undergo a stricter discipline.

In India, teaching has been a recognised and revered profession since the dawn of history. The teacher was expected not only to impart information and skills, but lead and guide his students to "Supreme Knowledge". Hence, the qualities laid down for teachers were very high. The *Pratisakhya* of the *Rgveda* states that the teacher should himself have passed through the recognised curriculum and have fulfilled all the duties of a *brahmachārin*, before he is allowed to become a teacher. The *Mundakopanishad* lays down that the teacher should come from a family of scholars and be "Brahmanīṣṭha"—dwelling in the Brahman.

The teacher, thus, was not one who passed on only "inert ideas". His ability to explain, expound, expand, re-interpret ancient knowledge in the light of his own experiences was constantly tested in open *parishads*. Though there was no formal course of training nor any degree awarded, the teacher was under almost life-long examination. For, the students flocked only to reputed teachers, well-known for both intellectual ability and moral integrity, and when either was doubted, they left in search of other teachers more worthy of their high regard.

One of the ways of recruiting teachers was through the famous 'monitorial' system. In Jataka period, we hear of preceptors asking

senior pupils to take charge of younger pupils. If they proved competent, they were permitted to stay on for longer periods, to gain deeper knowledge. When their maturity and knowledge had been proved, they became teachers in their own right.

Thus, in ancient times, the teacher was chosen by the students, on the basis of the reputation he enjoyed. This reputation itself was based on the knowledge he had gained and was able to communicate. Knowledge or '*gyan*' was not then interpreted in the narrow sense of mere academic or intellectual information as in modern days. A *gyani* or scholar was not only well-versed in scriptures or skilful in their exposition; he was one whose knowledge had been integrated with his total personality, one who had high moral qualities and deep spiritual experiences.

With passage of time and the rigidity of caste structure, teaching became a hereditary vocation, confined to the Brāhmaṇa caste. This monopoly, as could be expected, led to a deterioration in quality. The teachers who now taught only because they had the good luck to be born in a certain family, could not keep up the high professional standards required in ancient days. Thus, memorisation began to take the place of exposition and interpretation. The original practice of meditating upon and internalizing what is learnt, was given up, as the volume of commentaries increased in bulk and had themselves to be committed to memory. Thus, education began to be less and less creative, and more and more mechanical, as the centuries went by.

Not very unlike the ancient period, during medieval times also the teachers were a respectable class. The *Ulamas*, who devoted their entire life for learning and teaching, were not hard to come by. Such *Ulamas* were called *Ulama-i-akharat*. But there was one distinctive feature of the Muslim learned class that it was not hereditary. In fact, instances when teachers were invited from abroad for teaching in Indian *madressahs* are fairly common. One assumes that the selection and training of future teachers during medieval period would not be very different from that of the ancient Hindus and hence the prevalence of the monitorial system is inferred.

THE BEGINNING OF THE MODERN SYSTEM

The East India Company took a fairly long time to shoulder the responsibility for the education of the people they had begun to govern. Still, along with indigenous education, a new type of education imparted by the European missionaries was springing up. Teacher education, as it constitutes today, is a direct lineal descendant of the training given by the missions in the late 18th Century, to make their own votaries more efficient and persuasive.

The first normal school was set up at Serampore (Bengal) by Carey, Marshman and Ward, in 1793. This was the result of collaborative efforts between the Danish and English missionaries. The Portuguese missionaries also ran a few seminaries to train candidates for the priesthood. Meanwhile, Dr. Andrew Bell had come across

the monitorial system and began to employ it in Madras, between 1789 and 1796. The Bell-Lancaster system,¹ as it came to be called, was to become the corner-stone of teacher-training schemes for many a day to come.

The beginning of 19th Century saw many sporadic attempts to give specialized training to teachers. As early as 1819, the Calcutta School Society began to train teachers for indigenous schools in its institutions for imparting elementary education. Bombay was the first presidency to recognize officially the importance of training. Hon. Mountstuart Elphinstone, in his Minute dated 13th December, 1823, placed the improvement of mode of teaching first in the measures for the spread of education. He suggested that a very concise treatise or two treatises might be prepared in each of the native languages, containing a few rules for the management of schools in the "modern way", along with a short exposition of the advantages which would accrue both to masters and scholars from the adoption of such improvements. This was the very first proposal to give some sort of information about school management and organisation to intending teachers.

Early in 1824, the Special Committee of Bombay Native School Book and School Society recommended that a certain number of young men be assembled at Bombay to be initiated into the Bell-Lancaster system to be later on appointed as headmasters and superintendents. Nor was Madras far behind. In its letter of 25th October 1824, the Madras School Book Society Committee also proposed that a school for educating teachers be immediately established.

The youth who were thus trained were wholly of the upper castes, and mainly confined to the families which had a tradition of teaching. Major Robertson pleaded strongly that this be done away with, in his plan for improving instruction. Mr. Williamson, in his plan, introduced the idea of some external criteria for the recognition of teachers. He suggested that masters be appointed by the *zillah* or district magistrates after examination as to the extent of their qualifications by a committee of respectable natives, the *shastris* of the court presiding and they were to be appointed by a *sunnud*.

The first instance of deputation for training, occurred in May 1825. The villagers of Mozali Puluspey in North Konkan represented that they were too poor to keep a schoolmaster and it was decided to call a youth from there to Bombay to receive the required instruction. The Ahmednuggar collector sent another youth in August, the same year. Four youths of Poona volunteered to go to Bombay to acquire enough education to act as masters. The Sanskrit College at Poona was asked if they would add English education to their curriculum. For, in those days, it constituted the main component in the additional instruction imparted to would-be-teachers.

1. It was so called in England, for in India it was already in vogue long before Dr. A. Bell arrived. (*Editor*).

By 1826, teacher education was gathering momentum. Twenty-four teachers trained in the Bell-Lancaster system by the Native Education Society of Bombay, were distributed throughout the presidency. The training given emphasised knowledge of content. Methods of instruction as theory, was unheard of. But they had enough "supervised practice—teaching" under the prevailing system.

It took two years for Madras to do anything in the field. In 1826, a circular letter sent by the Committee of Public Instruction in Madras Presidency to all officers stated that a Central School was being established at the Presidency for the education of superior or collectorate teachers. "The Hindus will be taught grammatical rules, the vernacular language of the Province to which they belong and Sanskrit; the Mussulmans will be taught Hindustani, Persian and Arabic. Both will be instructed in the English Language as well as in Elements of European Literature and Science."¹ The selection of teachers was to be on a communal basis. The provinces were requested to send to Madras two candidates—one a Hindu and the other a Mussulman. They were to receive a stipend of Rs. 15/- per month throughout their studentship and the same pay was to continue when they returned to their provinces to join duty. The students thus selected were to be about 18 years of age, respectably connected and "distinguished for good natural talents." It was also deemed advisable that Brahmins should be preferred above other Hindus.

All these measures did not succeed in providing adequate teachers. Hence the Committee proposed that some of the law students at the College, "who have obtained the certificate of qualification for the situation of law officers and who, from their general acquirements in learning, may appear to be particularly eligible for the purpose" be sent into the provinces as teachers.

Finally, in June 1826, Madras had the distinction of establishing the first normal school under government management and expenditure. It concentrated on training teachers for district schools, and later, grew into the present Presidency College, Madras.

In Calcutta, Mrs. Wilson had founded a Central School in May, 1824 under the auspices of "Ladies' Society for Native Female Education". It had a section devoted to training women teachers, at a time when women had not begun to go out for work in the West.

In those early days, all the candidates received stipends and the Governments in the three presidencies took full responsibility for finding them employment. Of course, the difficulty then, as now, was in finding qualified teachers. Many requests for opening schools in various districts were turned down due to lack of a proper personnel to staff them. The Native Education Societies were more or less completely in charge of looking after the educational needs of their respective presidencies.

The school curriculum had expanded by 1828, to include History, Geography and Mathematics, in addition to English, Oriental

1. A.N. Basu, ed. *Indian Education in Parliamentary Papers*, Part I. Bombay, Asia Publishing House, 1952, p. 112

Languages, Grammar, etc. The references to teacher training in the letters of Governors and Court of Directors of East Indian Company were copious during the years 1824-28. Suddenly they grew scarce, till in 1835, William Adam took up the cause again. He proposed a number of measures for improving education. One of his main proposals was to convert the vernacular departments of English schools into normal schools for training teachers of indigenous schools. He also proposed the first ever recorded scheme for in-service training. It was suggested that teachers be required to study in these schools for three months every year, for four successive years.

In 1836, a committee was set up to study measures for improving Native Education. It reiterated the importance of establishing normal schools. References to this proposal and its non-implementation were made again and again in subsequent letters, notes and reports, by various committees, governors and the Court of Directors. But the sharp division of opinion among authorities stood in the way of any concrete steps being taken. For, although a strong majority was convinced of the need for giving special education to teachers, there was an articulate minority which saw no need for such a system. In 1842, F. Boutros, of Serampore, argued in his "Enquiry into the system of education most likely to be popular in Bihar and Upper Provinces" that normal schools were unnecessary as they were nothing else but schools where a higher course of instruction was given by selected professors, whose methods were to be adopted. "Our present colleges are normal schools, with respect to institutions of lower pretensions."¹ Since there were no differentiated courses of matter and method—rather, there were no method courses at all—the argument was perfectly void.

It was 21 years after Madras, in 1847, that Bombay had its first normal school, in the Elphinstone Institution, "under a master and superintended by the Elphinstone professors". Two years later, in 1849, Calcutta followed suit. The Normal School at Calcutta, established by Alexander Duff, had the unique advantage of having a model school attached to it.

Thus, by the middle of the 19th Century, all the three presidency towns had established normal schools. But the courses offered hardly differed from general education and "subject matter" courses.

THE LATTER HALF OF 19TH CENTURY

The second half of the century saw quite a few significant changes in the whole educational pattern of the country. The famous Wood's Despatch and the Hunter Commission's Report are landmarks in the history of Indian education, which laid the foundation for educational development in later years.

In 1851, the new Poona College—which was an amalgamation of the Sanskrit College and English school—introduced a Normal Depart-

1. J.A. Richey, ed. *Selections from Educational Records, Part II*. Calcutta, Government Printing, 1922, p. 9.

ment for training teachers. In 1852, Agra boasted of a similar school. The Surat English school too, added a Training Department.

Then came the 1854 with Wood's Despatch, which gave a tremendous impetus to all aspects and sections of education in the country. It considered training of teachers very important, and made some very practical suggestions for the recruitment and training of teachers. It visualized a more logical and systematic extension of the monitorial system already in vogue, and recommended that promising "pupil-teachers" be selected and given stipends. Their masters were to be given some payment to instruct the selected candidates during out-of-school hours. They were to be sent to the normal schools if they proved worthy, and on the completion of training, be given certificates and employed as schoolmasters on sufficient salary. Due to financial handicaps, many good students were apt to leave school without completing the course, to earn a living. To reduce this, the Despatch specifically recommended that the allowances be given in addition to the sum they would earn, these to be surrendered if the trainees left school.

This started the establishment of normal schools all over the country, though the number was nowhere near the requirements. In Bengal, a new experiment was begun in in-service training—the Circle System, which employed peripatetic instructors for the school teachers of a circle of 3 or 4 villages.

Two years after the Despatch, in 1856, the oldest existing training college in India was started as the Madras Normal School. It was meant for general instruction and training, which was the usual course for teachers. Banaras too established a normal school the very same year. In Bombay, Mr. E.I. Howard, the Director of Public Instruction, proposed the establishment of a separate training college for the preparation of assistant masters of English schools, but nothing came of it. Meerut gained its normal school in 1857. Apart from students recruited from "pupil-teachers" attending ordinary schools, teachers already teaching in schools were also sent for training to normal schools, if they were found not-too-incompetent at the time of inspection. The duration of the course vacillated widely—from 6 months to 2 years. Bengal, by this time, had 4 schools to train "Vernacular" teachers—at Hooghley, Dacca, Gauhati and Calcutta. Madras had 6 normal schools at Mayavaram, Cheyur, Vellore, Mangalore, Berhampore and Ellore, by 1858. Bombay had 4 training departments at Poona, Ahmedabad, Dharwar and Karachi.

The Despatch of 1859 laid even greater emphasis on teacher education than the one of 1854. It referred to the prevalent conditions, stating that the normal schools established during the previous five years have been confined almost exclusively to those for vernacular teachers. The Madras School and the Bombay Normal classes attached to colleges and principal English schools were exceptions, preparing teachers for both Vernacular and Anglo-vernacular schools. The Madras School had both a model school and a practising school attached

to it. But the conditions were still very unsatisfactory. "The institution of training schools does not seem to have been carried out to the extent contemplated by the Court of Directors....All reports concur as to the want of trained masters in the schools in which English is taught and as to the frequent inefficiency of the English teaching, from the want of masters well-acquainted with the language." This reproof had the desired effect and normal schools and training classes began to sprout all over the country. The new grant-in-aid rules of 1859 required that every teacher for whom grant was made, had to have obtained a Certificate of Training.

Although the training institutions were growing in number, the old controversy of the relative importance of general education and professional training had not yet been resolved. In Bombay, one finds the very same Mr. E.I. Howard, who had advocated the establishment of a separate training college in 1856-57, changing his tune four years later. By 1861, he began to consider a good general education more important than professional training. The assumption was that all teachers in high schools would be graduates and a graduate is so well-versed that he needs no further training. This was not surprising as methodology as distinct from content was still undreamt of, and the training course really meant further intensive study of the English language and the Western science. In actual fact, many teachers were undergraduates, to whom the headmasters were expected to impart some knowledge of teaching. Hence, first grade high schools were considered better training grounds than the normal schools.

Meanwhile, the Madras Normal School extended its functions in 1862 and added preparation for university examinations as part of them. But ten years later, in 1872, it returned to its original objective and concentrated on professional training. In 1876, its curriculum broadened to include agriculture as a subject and thus was pioneer in introducing a more practical bias to the training given.

The second important landmark in the history of education during this half-century was the report submitted in 1882 by the Indian Education Commission. It was responsible for popularising the terms "secondary education" and "secondary schools", though the terms had been introduced six years back, in 1876. The connotation in those days was entirely different from the modern usage. Secondary schools denoted English teaching schools in contrast to those schools teaching purely vernacular. It was only much later, in the twentieth century, that elementary and secondary education began to be associated with the chronological age of the pupils. Hence, the normal schools and training classes could not be said to be concentrating on elementary education, as the term is understood today. The training was dichotomized as to whether the trainees were intended for Vernacular or English schools, and often, both courses were run concurrently in the same institution. Thus, both secondary and primary teacher training has a common history till the beginning of the present century, when training colleges

for graduates and undergraduates began to be set up, as separate from normal and training schools, meant for primary and middle school teachers, whose qualifications were much lower.

When the Hunter Commission made its report in 1882, there were two training colleges in the whole country—at Madras and Lahore. There were 106 normal schools, mainly meant for teachers of vernacular schools.

The Madras College had at that time 8 graduates, 3 first year Arts Pass students and 18 Matriculates on its roll. The Lahore College had 30 students, and admitted those who had passed the First Year Arts.

The 1882 Commission re-emphasised in no uncertain terms the importance of teacher training. It stressed that there should be adequate inspection and proper training. It laid down that "an examination in the principles and practice of teaching be instituted, success in which should be a condition of permanent employment in any secondary school." This was a definite answer which put an end officially to the controversy of general education *versus* professional training. It was also the first recognition of the "principles" of teaching as apart from knowledge of the matter to be taught. It suggested that the term of training be shorter for graduates than for undergraduates, as the former did not have to undergo a further course in general education.

An important result of the recommendations made by the 1882 Commission was the institution of examination for Teachers' Certificates by the Provincial Governments. The pitfall was that the *initial* employment was not affected by this, and so teachers could be employed and carry on for years without training and without being made permanent.

Just after the Commission's Report—rather, almost coinciding with it—an interesting experiment was tried in the Madras Normal School. It owed the idea partly to Central Training College, Lahore. The students of the Madras School were all graduates or undergraduates and hence, proficient in general education. The school started three courses of lectures as a bold step in the field of professional training. The lectures were on

1. Psychology in its relation to Education, or the Scientific Basis of Education;
2. General History of Education in Europe, specially since the revival of learning; and
3. A development of the existing course of lectures on School Method and Management and on the Art of Teaching.

This course was so well-received that the University agreed to award a full-fledged diploma in its basis. By 1886, the Madras Normal School was reorganised as a Teachers' College, affiliated to the Madras University, preparing candidates for the Diploma of Licentiate in Teaching (L.T.). This indeed was a big step forward, as it laid the

foundation for further development of teacher education as part of University education.

In 1883, an Elementary Normal School was opened at Rajahmundry, which was to attain the status of a training college, before the turn of the century.

In Panjab, Central Training College, Lahore was doing prominent service in the field. The college had two courses. The Senior Course, open to F.A. pass students, confined itself to Principles and Practice of Teaching, Translation and Retranslation and Elementary Science. The Junior Course, to which Matriculates were admitted, included instruction in all subjects which the pupils would later be expected to teach.

Central Provinces led in the number of trained teachers, as 87 per cent of masters in government schools were trained in the year 1885. In most schools, Carpentry, Gymnastics and Drawing had been added.

The duration of the training courses varied from 6 months for *gurus* in Bengal, to 3 years in Bombay and Coorg. Coorg itself had courses varying from 6 months to 3 years. North-West Provinces (U.P.), Central Provinces, Berar and Bengal had mainly two-year courses.

A big problem facing all provinces was the unwillingness of women of good families to take up jobs or undergo training. Almost all provinces except Panjab, had separate normal schools for mistresses. The Government tried various means to induce more women to come out. Their main recruiting ground was wives of teachers, who were given stipends and other encouragement. But most of the women's institutions were run by missionaries and the pupil-teachers were mostly Eurasians and Indian Christians.

A special system which sprung up in Bengal in 1885-86, was that of the "guru" system. The headmasters of Middle Vernacular Schools, who themselves had undergone the prescribed courses of training in normal schools, were to try to impart instruction to *gurus* in neighbouring *pathsalsas*. The teaching was to be done out-of-school hours; the course was to lead to Upper Primary or the special standard for Lower Grade Training Schools, and to last for one year. The lower classes of the middle schools were to serve for practice-teaching. The headmaster was paid Re. 1/- per month for each *guru* he thus instructed.

Berar had adopted a method by which pupil-teachers were attached to selected middle schools with stipends of Rs. 4/- a month, for two years. They appeared for the Certificate Examinations along with regular students of normal schools.

Thus, the Hunter Commission made all teachers and schools examination-oriented and certificate-conscious. It created a problem for teachers who had already been in service and were now unwilling to spend one or two years at the normal school. The

Commission itself suggested a solution by recommending that teachers (mainly from non-government institutions) "be allowed to present themselves for examinations for any grade of certificate required by the grant-in-aid rules, without being compelled to attend a Normal School."

Madras Government objected that this would be a retrograde step, as involving practical abolition of normal training. But this objection went unheeded. Salary grants began to be given to all teachers, whether trained in a normal school or not, if they had satisfied certain tests. These tests were : (a) General Education Test of the Grade for which the teacher is a candidate ; and (b) Test in Principles of Methods and of School Management prescribed for the grade. The latter included : (i) questions on the best methods of teaching English and Vernacular Reading, Spelling, Grammar, Composition, Translation, Writing, Arithmetic, Geography, and History, (ii) questions on the art of Oral Teaching generally, (iii) questions on the form of School Registers, mode of keeping them and making returns from them, and regarding correct forms of official correspondence, (iv) Writing notes of a lesson on a given subject, (v) questions on the organisation of a High School and (vi) questions connected with Moral Discipline as affecting the character and the conduct of the pupils of a High School.

But the mere passing of the examination did not entitle a candidate to the certificate. A favourable report from the school inspector on the candidate's ability to teach a class in school and as to general character of his work, was awaited before the certificate was awarded.

While other provinces were emphasising written examinations, Panjab had already begun to give equal importance to the "practice of teaching". Each candidate was now required to give a lesson for half an hour in the presence of an inspector, as part of the certificate examinations.

Thus, five years within the Report of the Commission, some of its main recommendations were followed throughout the country. Grant-in-aid rules were tightened, to force private schools to employ only certificated teachers. The certificates were given on the basis of certain tests and examinations, which were becoming more and more based on pedagogical courses.

But the progress was almost at a snail's pace. The Governor-General-in-Council reiterated in 1887 and 1889 that colleges for teachers be assigned a more important place in education, but it bore little fruit. A Secondary Department (which later developed into the present Prantiya Prashikshan Mahavidyalaya, Jubbulpore) was added to Nagpur Training School in 1889 ; the Rajahmundry Training School was raised to a Secondary Grade Normal School and St. Anne's Training School was started for secondary and elementary teachers in 1890. Between 1887 and 1892, the training institutions for teachers of Middle, Primary and High Schools began to be separated. They were classified under three main categories—Collegiate, Secondary and Primary

—according to the grade of instruction to be given by the students after completing their course of training. In all schools of collegiate grade, English was the medium of instruction. In all primary training schools, vernacular was the medium, while the secondary training schools followed either medium according to convenience.

By 1892, there were 116 training institutions for men and 15 for women, throughout India. Out of these, only three were of the collegiate grade—the Madras Teachers' college, Lahore Central Training College and Nagpur Training Institution. The initial qualifications for admission to courses and duration of the courses varied widely.

Madras, as usual, had taken another step forward in teacher education during this quinquennium. In 1888, the Saidapet High School added Kindergarten and Primary classes, to be used for practice teaching by the teacher-trainees. Thus, the foundation for pre-primary teacher education was laid before the close of the Nineteenth Century.

North-Western Provinces, meanwhile, was placing a heavy burden on its trainees. The certificate was not awarded on the passing of examinations. The candidate had to serve for two years after succeeding in the examinations, before obtaining *permanent* Certificate. The course too was very extensive. Vernacular had to be learnt in three scripts—Persian, Nagari and Roman. Further, Elementary Mathematics, Rent and Revenue Law, Sanitation, History and Geography, Surveying, Theory and Practice of Teaching, and Physical Exercises, formed subjects for examinations at both Primary and Secondary levels. The Senior Course had, in addition, Physical Sciences.

The Secondary Department of Nagpur School, which had begun with a six months' course in 1889, extended it to one year in 1892. Instruction was given in Drawing, Kindergarten Method, Manual Training, Drill and Gymnastics, Carpentry, Clay and Cardboard Modelling, History and Principles of Education, School Method, Organization and Discipline.

But all these steps fell far behind the measures needed to provide qualified teachers in sufficient numbers. Madras began a system of "Sessional" schools somewhat similar to the *guru* system prevalent then in Bengal and Assam. The object was to afford facilities for village teacher to prepare for the Primary Examination. Unlike the *guru* system, in sessional schools, only general education was given to teachers already in service. No type of professional instruction was provided. The classes were held by special 'Inspecting Schoolmasters', for short sessions varying from 3 to 6 months in the year, who moved from place to place, according to the convenience of the "un-passed" teachers in the neighbourhood. Each teacher received a stipend of Rs. 4/- per month for attending these classes and was required to appear for the next Primary Examination. On passing this, the teachers were entitled to join a training course.

In 1892 too, Madras set up the Board of Examiners for Teachers' Certificates. Examinations began to be held both in Theory and Practice. "Normal" certificates were granted to teachers who had passed the examinations after attending the prescribed twelve months' course in a training institution (these were later converted to "Trained Teachers' Certificate"); "Ordinary" certificates (later on, called "Untrained Teachers' Certificate") were awarded to teachers who had passed the examinations, without attending the course.

The Madras College also took over the training of Gymnastic Instructors from the Physical Training and field Games Association, in 1892-93. The trainees attended the practising school for General Education, received lessons in Drawing and completed the course in 9 months. The Rajahmundry College was raised to collegiate grade in 1894, thus becoming the third training college in India and the second to grant the University Diploma of L.T. In 1896, Gymnastic Training Course was taken up also by this college.

Many provinces now insisted on the teachers serving for a prescribed period, after gaining certificates. The period varied from 2 to 3 years.

The present H.H. Maharajah's Training College at Trivandrum was another institution early in the field and started in 1895 as a government normal school. The Isabella Thoburn College at Lucknow instituted a course for English Teachers' Certificate examination in 1896; another training class for secondary teachers began at Kurseong.

Bengal had provision for training only Vernacular Teachers till 1896. In that year, arrangements for training English teachers in secondary schools were made by opening English classes in the five existing Vernacular Training Schools in Calcutta, Hooghley, Dacca, Patna, and Cuttack. The English courses confined itself purely to the technical aspect—General Principles and Methods of the Art of Teaching, Moral and Physical Training, Maintenance of Discipline and details of School Management in Theory and Practice. "Certificate was not given for theoretical acquaintance, however complete, with the contents of text-books on the art of teaching, unless the candidate shows he is able to apply these principles to practice and to teach a class and prepare notes of lessons to the satisfaction of the Inspector."¹ The first month of the training was entirely devoted to observing regular teachers in the practising school. During the next four months, the mornings were spent in giving lessons turn by turn by the candidates. The rest of the student-body observed and took down notes. The class-master interposed, when he felt it necessary, to correct the methods of the student giving lesson.

Bengal also, in a way, trained Drawing Masters. Drawing was compulsory for all trainees, since 1892. Those who secured marks above 60 per cent in the subject, were awarded special Certificates as Teachers of Drawing. The *guru* classes which had been started 15

1. Government of India. *Third Quinquennial Review*. Vol. I, p. 236.

years back, were not found to fulfil the hopes with which they were begun, and hence, were abolished by 1897.

Although training institutions were thus increasing in number and introducing new features, training as such, was rather unpopular. As the Director of Education of North West Provinces observes, "It has been the habit, not only of students, but also of the Inspecting Officers who select them, to regard normal schools as Reformatories, to which objectionable teachers from Village schools were sent by way of punishment; not perhaps, for their shortcomings as teachers, but because of some reasonable or unreasonable hostility on the part of their Deputy Inspector towards them."¹

Though officially nontenable, many inspectors, headmasters and teachers still felt training to be rather superfluous and pedagogical courses somewhat unprofitable. Still, the courses continued to change considerably in character, during the short period since the Commission had submitted its Report. For example the instruction for all the three grades in the Panjab—Senior English, Junior English and Vernacular—stressed mainly the pedagogical aspect. "Chief truths of Mental Science are made easy and impressed by familiar school experiences. School organization is taught by requiring every student to keep and enter up daily an attendance and admission register; to draw up frequently a timetable for a particular class or division of a school; to classify pupils brought for admission, etc.; the art of teaching is exemplified by model lessons given by the Principal and other members of the staff, by Criticism lessons given by the students and by work in the Model schools. Three students from Senior English, five from Junior English and five from Vernacular class are sent to the Model school every week; at the end of the week, the masters entrusted with the supervision of students send detailed criticism of every lesson and reports on their work. The criticism lessons given by the students are designed to show how courses of lessons should be drawn up, how typical lessons in each subject be given and how the principles laid down in the lectures on Education are applied in actual school work."²

Panjab also had classes to train teachers for *zaminadari schools*. The Training College and normal schools worked in close collaboration. The college principal undertook inspection of all the schools once or twice a year to ensure standards and methods.

Panjab was the only province to have no separate school for mistresses as yet. Normal classes for women teacher trainees were attached to ordinary schools for girls, since 1891. Stipends were offered to girls who had passed the Upper Primary or Middle, to join these normal classes and prepare for Teacher Certificate Examinations.

Central Provinces began to train teachers for primary schools,

1. *Ibid.*, p. 238. 2. *Ibid.*, p. 240.

on the "bonus" system, which was comparable to the *guru* system in vogue in Bengal.

Bombay instituted the S.T.C. (Secondary Teachers' Certificate) examinations in 1899. The Theory of Teaching Course consisted of reading three books prescribed by the Department and the practice of teaching was examined by Inspectors in actual teaching situation. The two papers introduced by Bombay, for theory, still retain their nomenclature in many universities. They were: (1) History of Education and General Methods and (2) Special Methods, School Organization and Hygiene.

Thus, at the close of the 19th century, some of the major trends shaping teacher education were already in evidence. One university had begun to award a diploma in the field; the connotation of terms "Secondary" and "Primary" had changed and the training institutions separated; professional and pedagogical courses were now replacing "general education"; examinations were being held by duly set-up Boards in both Theory and Practice; model lessons, criticism lessons, observations, etc. had begun to gain prominence in the courses offered; courses for teaching special subjects like Art and Gymnastics had started; even Pre-primary Teacher Education had begun. Teacher Education had now survived the mishaps of infancy and was fast growing up.

THE FIRST DECADE OF THE TWENTIETH CENTURY

At the dawn of the 20th century, there were 6 training colleges in India—at Saidapet, Rajahmundry, Kurseong, Allahabad, Lahore and Jabbalpur. There were also 50 secondary teachers' schools and 54 primary teachers' schools. Bombay was the only province where primary was still equated to Vernacular and Secondary to English Education.

For higher grade institutions, the course was usually one year, but the Collegiate Branch of Jubbulpore Training Institution insisted on 2 year courses, both for graduates who pursued the Collegiate Grade Certificate, and for F.A.'s and Matriculates who had entered for Secondary Grade Certificate.

For lower-grade institutions, there was a wide diversity. Bombay, Bengal, Assam and Berar had 3-year courses (Assam had even a 4-year course) with examinations at the end of each year, for different grade certificates. United Provinces and Central Provinces had 2-year courses, while the others ran one-year courses.

The curriculum too presents an equally bewildering variety. Madras and Bengal had exclusively professional courses, at all levels. Central provinces had only professional course for higher grades but lower grade students had also to learn the subjects taught in the schools for which they were intended. Kurseong College was specializing in giving training in Kindergarten methods. All the other provinces offered "content" much more than "method". By 1901, Bengal had begun to replace Elementary Science by differentiated curriculum

as Chemistry, Physics, Botany, Agriculture and Natural History. The United Provinces introduced General Knowledge, which comprised Agriculture, Rent and Revenue Law and Obligations imposed on the public by the Criminal Law. By this time, the Panjab had abolished the *zamindari* classes. All schools and colleges had residential facilities and practising or model schools attached to them. The prominent text-books were Currie's "Common School Education" and "The Manual of the Science and Art of Teaching." Physical Training, Gymnastics, Drawing, Manual Work, etc., were compulsory for all.

Madras was forging ahead with schemes for teachers for Specialised Instruction. Students from Madras College attended, other technical colleges at College of Engineering, College of Agriculture School of Art, etc. for getting acquainted with special or technical subjects they may be called upon to teach later. A special Technical Teachers' Certificate was awarded to the teachers, who had passed the Advanced, Intermediate, or Elementary Technical Examination in any of the subjects included in the Madras Technical Scheme.

Bombay gave certificates for teaching Art, Agriculture, and Industrial Arts. Technical Workshops were attached to training schools at Dharwar and Hyderabad (Sindh). Though Bengal gave Art Teachers' Certificate, the examination was confined to proficiency in Art and did not include methods of teaching it.

Nor did the Panjab lag behind in such ventures. It gave Certificates in Teaching two groups of art subjects and three groups of technical subjects. The latter were (a) Architecture and Building, (b) Cabinet Making and (c) Metal Work.

Women Teachers continued to present a problem. While the number of masters undergoing training in 1902 was 4,384, the number of women teachers was 11,252. There were only 51 institutions for women spread all over the country. Panjab still had not established a normal school for lady teachers.

Although the training institutions for men and women were run separately, the courses remained the same. But, there were some noteworthy exceptions. The Ahmedabad Mahalakshmi Female Training College had 2 courses running for 3 years each, divided into (a) General and (b) Kindergarten. The General Course included subjects like Household Accounts, Domestic Economy and Needle Work. The Girgaum School also gave certificates to both secondary and kindergarten teachers. The kindergarten curriculum makes interesting reading. There were two levels—Elementary and Higher. The course for Elementary Kindergarten certificate consisted of :

- (a) **Compulsory.** (1) Biographies of Froebel and Pestalozzi, (2) Nature of knowledge, (3) Kindergarten: Gifts and Occupations, (4) Music and Singing, (5) Class teaching and (6) Black-board Work.
- (b) **Optionals** (1) Knowledge of Child Nature, and (2) Practical Geometry.

The course for Higher Certificate comprised :

- (a) **Part I.** (1) Geometry, (2) Botany or Zoology, (3) Physiology or Elementary Physics or Chemistry of common life, (4) Music and Singing, (5) Kindergarten Gifts and Occupations (6) History of Education.
- (b) **Part II.** (1) Theory of Education, (2) Froebel's Principles, (3) Organization and Methods of Education, (4) Physiology, (5) Class Teaching, and (6) Black-board Drawing.

In addition to the already confusing number of certificates given, Madras and Central Provinces began a system of "Approved Service" Certificates. Madras awarded it to headmasters who had no professional certificate, but had 7 years of approved service in a recognized school and to teachers who had served for five years. The Central Provinces granted this certificate on the recommendations of an inspector to such uncertified masters in schools, who being 30 years of age and above, had rendered conspicuous efficient service.

The directors and the inspectors of education from the various provinces were much impressed with the progress of teacher education under their jurisdictions. The various official reports of the period breathe an air of self-satisfaction and complacency, that though the number was small, the training institutions were doing a creditable job, turning out capable and worthy teachers.

Into this stream of placid waters, fell the Government of India's Resolution on Indian Educational Policy, passed in 1904. It caused a lot of flurry, as it insisted that the progress made was by no means satisfactory. The Resolution observed :

If the teaching in secondary schools is to be raised to a higher level, if the pupils are to be cured of their tendency to rely upon learning notes and text-books by heart, if in a word, if European knowledge is to be diffused by the methods proper to it,—then, it is most necessary that the teachers should if themselves be trained in the art of teaching. The Government of India are glad to know that the principles of providing training institutions for secondary teacher meets with universal acceptance among the local governments and administrations. The time has come to extend the system to provinces where it does not exist. Not only must the supply be increased, but the quality of training given must be improved.

The period of training for students must be at least two years, except for graduates, for whom one year's training may suffice. For graduates, the course of instruction will be chiefly directed towards imparting to them knowledge of the principles which underlie the art of teaching and some degree of technical skill in the practice of the art. It should be a University course, culminating in a University degree or diploma. For others, the course should embrace the

extension, consolidation and revision of their general studies ; but the main object must be to render them capable teachers and no attempt should be made to prepare them for any higher external examination. The scheme of instruction should be determined by the authorities of the training college and the Education Department, and the examination at the close of it should be controlled by the same authorities. The training in the theory of teaching should be closely associated with its practice, and for this purpose, good practising schools should be attached to each college, under the control of the same authority. The practising school should be fully equipped with well-trained teachers, and the students should see examples of best teaching and should teach under capable supervision. It is desirable that training colleges should be furnished with a good library and a museum in which will be exhibited samples, models, illustrations or records of the school work of the province. Every possible care should be taken to maintain a connection between the training college and the school, so that the student on leaving the college and entering his career as a teacher, may not neglect to practise the methods which he has been taught and may not be prevented from doing so and forced to fall into line with the more mechanical methods of his untrained colleagues. The trained students whom the college has sent out, should be occasionally brought together again and the inspecting staff should co-operate with the training college authorities in seeing that the influence of the college makes itself felt in the schools.¹

Thus, with rare foresight, the Resolution pin-pointed early the mistakes and inadequacies which were to beset the teacher education system. Many of the suggestions such as progressive methods of teaching, a *good* practising school, *good* library, a museum, etc., still remain in the realm of dreams, while the unrealistic approach of the training colleges, the gulf between training institutions, and schools, the lack of communication between the Directorate and teachers' colleges, the consequent relapse of trained teachers into regressive measures, are all evils against which a continuous outcry has been going on, ever since training gained in popularity.

This Resolution stirred up some activity in the field. By 1907, all universities except Bombay began to award degrees in teaching. Bengal and the United Provinces had L.T. for non-graduates and B.T. for graduates, after one year's professional study. Panjab gave B.T. to graduates, who had undergone a two-year training course. Madras still awarded L.T. Though not affiliated to the university, Bombay established its secondary training college in 1906, with its own S.T.C. Diploma. It was located in the Elphinstone High School. The

1. Government of India, *Indian Educational Policy, Resolution of the Government of India in the Home Department*, dated 11th March, 1904, para 38.

students numbered 35, all deputed from aided schools. They attended lectures on Psychology, Methods, and History of Education. Elocution and Drawing were compulsory. Most of the second term was spent in demonstration and criticism lessons. The trainees were also taken on excursions to widen their ideas and train them in conducting such outings in their own schools. A noteworthy innovation was the institution of extension lectures. Two lectures a week, in the evenings, were thrown open to all teachers in Bombay. It was expected to cover all subjects of interest to teachers in a few years. Bombay College was the first to introduce Psychology as a separate subject.

Rethinking on syllabus and courses, expansion of building and equipment, and increase in number of training institutions went on in all provinces. The Superintendent of the Training Institution of Central Provinces suggested the beginning of internal assessment. While the written examination for L.T. degree should be held by the university, he felt that the rest should not be left to "external examiners, but to the institution itself, which would take into account student's work throughout his training. More important still is to keep the great body of teachers, and specially headmasters, in touch with the institution; periodical visits of the headmasters to the model high schools would be one way of accomplishing this; conferences are another, and much can be done by co-operation between the institution and the Inspectorate."¹

The training of vernacular teachers was gaining a better uniformity, though the terms still varied. The institutions were called training colleges in Bombay, normal schools in U.P., Punjab, C.P. and North West Provinces, training schools in Bengal and Assam. The students were admitted after they had completed the Vernacular Middle standard (7th class after Infants' class, in all provinces except C.P., where the trainees were admitted after the 4th standard) and underwent a two-year course comprising some extension and revision of their studies and professional training in the theory and practice of teaching. They were given free lodging, charged no fees and in most cases received stipends of about Rs. 7/- per month. They obtained employment in primary schools, middle vernacular schools and vernacular classes of secondary schools.

Poona College, meanwhile had begun a new venture in 1902. It tried to tackle the apathy of old trained teachers, by instituting "Retraining" courses for teachers, to acquaint them with new methods of instruction. It had also introduced training in First Aid, giving Ambulance Certificates to successful candidates. The programme of kindergarten training given at the time is also noteworthy. The details are given below:

The kindergarten teaching of infants is based on Nature Study being connected with peculiarities in the objects of the different seasons. A programme of excursions is arranged for each class in the practising school, and pupils are taught

1. Government of India. *Fifth Quinquennial Review*, Vol. I, p. 221.

not only to observe natural phenomena, but also to take notes of objects of geographical and historical interest. Sometimes they are taken to shops to see the work going on in them. The pupils in the training colleges are enabled to watch the life-history of insects, development of fish and frogs, habits of ants which are kept in artificial nests. Collections are made of typical weeds in the compound and they are named and described. In fact, it is attempted to invest all surrounding objects with an interest.¹

(Bengal reinstituted Guru Training Schools in 1903, with some major changes.) A Government Upper Primary School was established in each sub-division, with two teachers in charge. The headmaster was a trained man who had passed through a first grade school. Attached to each of these, was a class of about 10 *gurus*, who attended the course for 2 years and spent part of their time in studying upto a higher standard of primary education than they had previously attained, part in acquiring some knowledge of Drawing, School Gardening and other subjects, and part in learning a Manual on the Art of Teaching and actually teaching under the supervision of the head. It was customary to train both new candidates and teachers already in service, the latter receiving stipends.)

In 1905, the United Provinces also introduced a system of "Pupil Teachers", the principle being to attach trainees to existing schools. But here, it was mainly devoted to pre-service training. Admission was restricted to pupils under 25, who had passed the Upper Primary Examination. But priority was given to those who had completed the Middle Vernacular Course and/or had experience of teaching. The one-year course consisted of (a) Teaching (Theory, Method and School Management) (b) Second Language (c) Arithmetic (d) Revision of other subjects up to Upper Primary Standard and (e) Drill.

While Bengal felt very dissatisfied with the working of this system, United Provinces reported favourably. Assam and Central Provinces too began to adapt such schemes.

Madras was feeling discontented and extended its course from one to two years for middle and primary teachers. It began to continue General Education with professional courses. The passed students remained "probationary" till they showed 18 months' satisfactory work as regular teachers and satisfied the inspectors of their practical ability in teaching, when they received their final certificates.

(Another improvement was the introduction of Agricultural Courses into the curriculum of Training Courses. In C.P. teachers from training schools spent six months in a farm school. In others, agricultural instructors were appointed. The aim was not merely to give some training in Nature Study, but also to equip them to become useful members of village communities. It was advocated that either a graduate of agriculture should undergo full training course or a good

S.C.E.R.T., West Bengal
1. *Ibid.*, p. 224.

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student of training college be sent for a full course to a college of agriculture, as the prevailing system was not achieving the objective.

A new "species" of "Zenana Teachers" was growing up to popularize women's education. But they were hardly trained and very ill-equipped. Meanwhile, an important and far-reaching influence in this field, was being wielded by the Brahmo Samaj, which was beginning to set up educational institutions of its own.

An intriguing subject for examinations in Central Provinces was, among other things, "organization of a primary school and proof of ability to maintain order and inculcate principles of Truthfulness, Obedience and General Morality." One wonders how the last trait was measured.

Though teacher-education was thus progressing undoubtedly, the authorities became aware of the need for filling in the gap between practice-teaching and actual school-situations. Hence, U.P. tried out a new experiment of having practice-teaching under ordinary conditions, i.e., one student managing several classes simultaneously, while others observed and criticised. (The method of teaching in training colleges was by lectures, essays, and model lessons and criticism lessons in attached schools. As the principal of David Hare Training College, Calcutta, explained :

"The aim of the training course is to give the teacher an all-round preparation for his work, both from theoretical and practical points of view. On the one hand, he needs a knowledge of the subjects which he has to teach, an acquaintance with the nature of the pupil's mind and of the principles which underlie the teaching art and some knowledge of the history of education in the past. On the other hand, he learns by actual practice in the school-room to control and teach his class. The theoretical training has been imparted by means of lectures on the theory and practice of teaching in relation to Mental and Moral Science, on the methods of Teaching School subjects, of maintaining discipline and on the history of education. Weekly essays on appropriate subjects have been written by the students and the library as an aid has been at their disposal; also test papers are periodically set by members of the staff. As to practical training, each student attends demonstration lessons by staff; each has to prepare and give under supervision lessons in the schools, and each has to watch and criticise lessons given by the other students."¹

The students were also tested in teaching English by Direct Method to young boys who knew little or no English.

The training colleges had also now begun to think in terms of specialisation in a particular subject, although the bulk of the training was directed to the attainment of method applicable to all subjects

1. Government of India. *Sixth Quinquennial Review*, Vol. I, p. 193.

indiscriminately. On the whole, the trained teachers breathed new life into the schools.) "But", says a Bombay Report, "the weakest point of the system may be described as the turning out of enthusiastic reformers impatient of ancient methods, who are sent to schools where these modern ideas are regarded as heresies and these innovations viewed with dislike and distrust."¹

To tackle this, short, "Retraining" classes were being run in many places. Some provinces had also begun to have conferences, held by inspecting officers while on tour, to effect a certain amount of training for untrained teachers and retraining those whose training had rusted. A major problem beginning to make itself felt towards the end of this decade was "Wastage" in training. A considerable proportion of trained pupils left teaching to join other jobs.

The inspecting staff who themselves had no training was also a factor in the slow adaptation of new methods. To offset this, some provinces took the welcome step of having their subordinate inspecting staff trained. Assistant Deputy Inspectors in Bombay and Sub-Inspectors in Calcutta attended special training classes. Bengal and Assam prescribed certain examinations for Inspecting Officers in Vernacular literature, Art of Teaching, Discipline, Organization and Departmental Rules and Orders.

In 1908, another step forward in promoting better professional standards was taken, with the formation of Teachers' Associations in Bombay, Madras and Panjab.

Thus,) by the end of the first decade of the present century, teacher education had taken a definite pattern and several major steps had been taken. The remaining decades are but a record of the modifications of the pattern and intensification of certain measures.)

THE FORMATIVE DECENNIUM

The next decade began with another Government of India Resolution (1913). It once again drew attention to the inadequacy of the teaching staff and training facilities by pointing out :

"Few Reforms are more urgently needed, than the extension and improvement of training of teachers, for both primary and secondary schools in all subjects including in the case of latter schools, science and Oriental Studies. The objectives must steadily be kept in view that eventually under modern systems of education, no teacher should be allowed to teach without a certificate that he is qualified to do so. There are at present 15 colleges and other institutions for the instruction of those who will teach through the medium of English; these contain nearly 1,400 students. There are 500 schools or classes for the training of Vernacular (mainly primary) teachers; their students

1. *Ibid.*, p. 196.

number over 11,000. The course vary in length from one to two years. The number of teachers turned out from these institutions does not meet the existing demand and is altogether inadequate in view of the prospects of a rapid expansion of education in the near future. The Government of India desires local governments to examine their schemes for training teachers of all grades and to enlarge them, so as to provide for the great expansion which may be expected, specially in primary education.

As regards teachers' colleges for secondary schools, some experience has been gained. But the Government of India are conscious that the subject is one in which a free interchange of ideas based on the success or failure of experiment is desirable. The best size for a practising school and the relations between it and the college; the number of students in the college for which the practising school can afford facilities of demonstration without losing its character as a model institution; the nature of, and the most suitable methods of procedure, in practical work; the relative importance of methodology and of psychological study; the best treatment of Educational History; the extent to which it is desirable and practicable to include courses in subject matter in the scheme of training, specially courses in new subjects such as Manual Training and Experimental Science; the points in which training for graduates should differ from that for non-graduates; the degree to which the body awarding a Diploma in Teaching should base its award on the collected records of the students' work—these and other unsolved questions indicate that the instructors in Training Colleges in different parts of India should keep in touch with each other and constantly scrutinize the most modern developments in the West. Visits made by selected members of the staff of one college to other institutions and the pursuit of furlough studies would seem specially likely to lead to useful results in this branch of education."¹

Thus the Resolution helped to pinpoint the various problems faced by teacher education and which still, after half a century, remain unsolved. It sought to reinforce the policy of considering training as essential requirement for teaching.

This was followed up by a circular issued by the Central Government in 1916. It asked the Provincial Governments to step up teacher training, so that the number of teachers trained each year should not be less than the number of new teachers required to replace those who have died or resigned, or to meet the demands created by the expansion of education.

1. *Educational Policy of the Government of India*. Resolution of the Government of India in the Department of Education, dated 21st February, 1913, paras 51-52.

Meanwhile, the First World War had started and its effects were beginning to be felt in the slackening of educational measures. The 5 years from 1912-17 hardly saw anything worth mentioning, except the opening of 3 colleges for women—Diocesan College and Loretto House School in Calcutta and St. Bede's College at Simla.

Specialisation was gaining ground. Teachers for Manual Training formed the special feature of Madras, though some other provinces too made provisions for them. In the Panjab, Mayo School of Arts and Lyallpur Agricultural College trained teachers of Art and Agriculture respectively. Central Training College, Lahore opened a class for classical Teachers, which unexpectedly proved popular with *pandits* and *maulvis*.

In their efforts to provide experience of real school conditions, Assam provided its two normal schools with three practising schools each :—(1) A One-teacher school with 4 to 5 classes, (2) A Two-teacher Primary School, and (3) A Three-teacher Middle Vernacular School.

The Pre-primary Teachers' Training too was crawling forward. Bombay set up a kindergarten certificate towards the end of the decade, though only for European mistresses; and Madras opened Montessori Training Classes in the Training School at Triplicane.

The training at collegiate level was gaining some much-needed attention. Some new text-books such as Quick's *Educational Reformers* and Sully's *Psychology for Teachers* were added.

The Calcutta University Commission appointed in 1917 studied all aspects of university education, and presented a voluminous and comprehensive report towards the end of the decade, more or less coinciding with the end of the First World War. Its observation about teacher training, though based on the working of the Calcutta University, was really a comment on the whole of India and affected the future growth and development of all. It lamented the inadequacy of the number of institutions and the quality of training given. It criticised the similarity of the courses for B.T. and L.T., though their students were of different calibre. It was suggested that "the aim of the higher course should be not only to secure that the degree-holder is equipped as a competent class teacher, but also to secure that he understands the principles of teaching, classification of discipline and school children, organization and purpose of games and other kinds of physical exercise, the control of a small office and that he has a sound conception of the purpose and organization of the educational machinery of a modern state." Thus, the trained graduate was also to be trained for administration, while L.T. was to be a training "to obey instruction with intelligence." It proposed that L.T. students who proved above average, may be allowed to proceed to B.T. after a further course in training college. The heaviness of the syllabus and its focus on non-essentials also came in for adverse criticism.

Finally, the Sadler Commission made the following recommendations :

1. A Department of Education be established in the Universities,

to promote systematic and practical study of the Science and Art of Education; to provide increased opportunities for professional training of teachers; and to arouse among the students a deeper interest in the work of the teaching profession and the opportunities it offers for public service.

2. Each Department should have at least a Professor and a Reader, with a number of assistants. It should work in close collaboration with those engaged in the study of Vernacular, English, Phonetics, Science, Physical Training and Technology (to help with Manual Training). The medical men should be able to help with the study of those aspects of education which call for a knowledge of medicine and of the treatment of what is abnormal in mind and body. The Department of Education should also avail of opportunities to consult and collaborate with Departments of Experimental Psychology, Philosophy, History and Economics.
3. The demonstration schools should be under the direction of the University, for "practical trial of new methods of teaching, new combinations of school subjects and new plans of school organization." These were carefully differentiated from practising schools. The former were to serve as a laboratory for educational experiments, whereas the latter were to follow the lines of organization normally found in schools.
4. The importance of a good library, which should include all important works on Education, chief official reports issued in India, U.K., U.S., Japan, and other countries, principal educational journals of the world, etc., was stressed.
5. The Department was expected to issue periodicals on work done and monographs on education. Thus, it was to offer opportunities for research in Indian Education.
6. The Department was to form a link between Boards of Education on one hand and Intermediate colleges and Committees of High School, on the other.
7. The education of the public in the aims and progress of new educational movement, work of educational reformers, the social and educational aims guiding education at different levels, defects of the existing system, etc., through public lectures or other means was also to be undertaken by the Department.¹

Thus, a blueprint of the functions expected from a teachers' college was sketched out in detail by the Calcutta University Commission nearly half a century ago. It went on to observe that three essential requirements were to be emphasised in teacher training—knowledge of the subject-matter, practical training and theoretical

1. Government of India. *Report of the Calcutta University Commission*, Vol. V. Calcutta, Government Printing. 1919, pp. 328-30.

training which should not be hurried or superficial. "But under the existing conditions, the first is often unfulfilled; second rarely possible and third too little regarded by the University in framing its regulations."

It recommended that a course specially designed for intending teachers be provided at the Intermediate level, at least half the aggregate marks be awarded for sessional-practical work and Education be allowed as an option at B.A. level. It also noted the special weaknesses of the existing training system. In this connection the oral evidence of Mr. W.E. Griffith, Principal of the David Hare Training College, is specially worthy of notice. He observed, "The majority of teachers are keen on their profession, but do not understand the general principles which underlie their work. This lack of knowledge is particularly noticeable in connection with (1) Real purpose of Education, (2) Responsibility which school teaching entails, (3) Supervision by Headmasters, (4) Arrangement of classroom, (5) Monthly routine and Daily preparation, (6) Methods of teaching school subjects, and (7) Difference between lecturing and teaching." He also lamented the stress on Experimental Psychology which concentrated on nonsense-syllables, ignoring the child in the classroom.

The Sadler Commission also recommended that a post-graduate degree in Education be instituted. Thus, the second decade of the present century ended with many valuable suggestions and recommendations which were to bear fruit in after-years.

THE EXPANDING TWENTIES

After 1921, Education became a provincial subject. The general dearth of teachers had led to many temporary measures as temporary training centres, training classes attached to ordinary schools and colleges, etc., in addition to new training schools and colleges.

The retrenchment policy of the Government and the Non-Co-operation movement launched by the Congress had adverse effects on education as a whole. Yet, some steady movement forward was certainly visible. Mysore instituted the first Faculty of Education in 1925, and the S.T. College, Bombay was affiliated to Bombay University in 1923. The Lady Willingdon Training College, Madras, was born in 1923. It organised the first Diploma Course for women in Physical Training in 1928 and introduced Domestic Science as special Subject for L.T. in 1929. A number of provinces took steps to revise their curricula. At Moga, W.J. Mc Kee also tried Project Method to train rural teachers and found it to be highly successful. Some practising schools also experimented with the Dalton Plan. Madras opened a college in 1924 at Chidambaram, for training Sanskrit and Tamil teachers. Practical bias was increasing, with instruction imparted in a wide variety of manual-work, like Wood-work, Weaving, Rattan and Bamboo work, Textile Printing, Aluminium Work, Engraving, etc. Panjab was concentrating on producing teachers specially trained to adapt the instruction given in rural schools to the needs of the rural community. In this connection, the Royal Commis-

sion of Agriculture had much to say. It expressed the opinion that education in rural areas should bear a close relationship to the daily lives of the people. It further observed that "It is essential to the happiness and efficiency of children in the villages that their upbringing should be in harmony with their environment, and to this end, it is most desirable that every element in the education they receive in their village schools should draw strength and inspiration from the life of the countryside."¹

But it was obvious that a mere change in curriculum would be useless. As an official report observed :

In fact, the training of teachers is infinitely more important than the alteration of the curriculum. One and the same curriculum can be interpreted in entirely different ways by two teachers who have not received similar training. A teacher trained to have what may be called a rural bias will make knowledge a living thing in relation to every day happenings in village life, while a teacher without a rural bias will probably never be able to make his pupils appreciate that the acquisition of knowledge has some relation to actual life.²

The Hartog Committee of 1929 was shocked to learn that only 44 per cent of teachers in primary schools were trained and that only 28 per cent had completed middle course. The Committee pointed out that the success or failure of any scheme of instruction ultimately depended on the teacher, and far-reaching improvements were needed in the quality of training, status and pay of the teacher, before real progress became possible. It recommended that village teachers be recruited from persons who are likely to retain a sympathetic understanding of rural conditions. In this connection, it commended the policy followed in the Panjab.

In U.P., too, the bridge between the teachers and villagers was wide. Mr. Hartog characterised the task before the Education Department as three-fold. "First, to secure that the education in the rural vernacular schools has a close relationship to the mass of the people ; second, to increase the efficiency of the existing teachers so that the children shall not be dulled but enlivened in schools and third, to ensure that all new teachers appointed shall be good practical educationists interested in rural life and conditions."³

Hence, the Hartog Committee strongly pleaded that the initial qualifications of teachers be at least Middle Vernacular and that they should be well-suited to village requirements. It characterised the existing provisions as too low. "The period of training is too

1. Government of India. *Report of the Royal Commission on Agriculture*. London, H.M.S.O. 1928, p. 513.

2. Government of Madras. *A Report on the Development of Elementary Education in the Madras Presidency*, 1927, p. 28.

3. Government of U.P. *A Further Report on Primary Education in U.P.*, 1927, p. 28.

short, curriculum too narrow and the teaching staff inadequately qualified." It went on to analyse the causes of poor progress by observing as :

Most provinces are saddled with large number of untrained and inefficient middle-aged teachers who cannot be got rid of and will not disappear from schools for many years. They handicap the schools, not only because they are inefficient themselves, but because they exercise, specially if they are head teachers, a sterilising and depressing effect on the younger and well-trained recruit...It seems to us quite clear that, as matters stand in India, effective arrangements for training vernacular teachers must, generally speaking, precede the expansion of primary schools; and the training of vernacular teachers itself depends on a good supply of recruits from middle vernacular schools. Hence, money spent on expansion and improvement of middle vernacular schools and on vernacular training institutions will yield a larger and more permanently fruitful return than money spent on almost any other of the many objects which are dear to the heart of the educationist. It applauded the attempts made in some provinces to stimulate in the village teacher a desire to improve his methods of teaching and to establish some touch with recent developments....Journals for teachers in the Vernacular, Refresher Courses, Conferences, and meetings of Teachers' Associations, can do much to brighten the lives of the teachers and improve their work. In several provinces, refresher courses are held at training schools and teachers' meetings and conferences form an essential part of the programme of an inspector's visit to any locality.¹

It will be worthwhile to summarise the two-year training programme for primary teachers of the Panjab. It laid stress on rural uplift. The details are given below.

All Vernacular Training Institutions have developed into centres of training in community and propaganda work. Dramatic clubs and singing parties have carried on a good deal of propaganda. Villagers have been selected for intensive uplift work by the Gakhar and Jullundar schools. Pupil teachers have dug manure pits, popularised vaccination and inoculation, chlorinated wells, filled up ponds, tried quininisation schemes, held health exhibitions, laid out village gardens, cleaned streets, constructed drains and attended to all aspects of village amelioration as sanitation, cooperation, hygienic living, and co-education. At Jullundar, every pupil-teacher has been trained to handle a magic lantern and to lecture with it. In some schools meetings are organized where students are required in turn

1. Government of India. *Hartog Committee's Report*. 1929, pp. 76-78.

to address their fellow-students as though they were illiterate villagers; this is done with the object of giving them ample practice in community work before they proceed in small parties to villages in neighbourhood, singing songs and delivering lectures on useful topics and offering assistance to those in trouble. Their services have been utilised in organisation of health weeks, locust campaigns and furtherances of the cause of rural uplift.¹

It should thus be realised that community-centred training schools were in vogue and functioning well even forty years ago.

THE RESURGENT THIRTIES

The thirties—the decade preceding that of Independence—saw many significant changes in the history of the nation. It could not but make itself felt in the field of education. Before going on to the national scheme evolved during this period, the continuation of previous trends may be reviewed.

By 1932, thirteen out of the existing eighteen universities had acted on the recommendation of the Sadler Commission and set up Faculties of Education. New Delhi saw the establishment of the Lady Irwin College, by the All-India Women's Conference on Educational Reform in the same year. It ran a three-year course for those who wished to qualify as high school teachers of Home Science.

A new degree—B.Ed—was started by the Andhra University in 1932. United Provinces experimented with Tutorial Groups since 1935. Bombay was the first to institute a post-graduate degree in Education—M.Ed.—in 1936. The degree was gained by research. The Spence Training College, Jabalpur, introduced some research work even at the B.T. level. Bihar too introduced M.Ed. degree in 1934-35, but the term was a misnomer, as it *replaced* the old B.Ed. degree, and was not a post-graduate course.

Panjab sent Assistant District Inspectors to Moga in 1935, to receive training and demonstrate them to their teachers in their subdivisions, on their return. In 1936-37, Allahabad Training College introduced a course in Moral and Social Hygiene for men, with emphasis on Principles and Methods of Sex Education.

(In the meanwhile the Government of India was getting concerned about the unemployment problem of the educated and lack of vocational proficiency. The Abbott-Wood Report, submitted in 1937, is a significant landmark in Indian educational history, in this connection. It examined the existing system of teacher training as a whole, and was pained by the gloomy conditions under which the ordinary rural teacher worked. What it says in this context is so fundamental and relevant, that it is worth quoting at length. It observed :

The normal school ought, in addition to training the intending teacher in the technical arts of his crafts, attempt to do

1. Government of India. *Tenth Quinquennial Review*, Vol. I, p. 155.

something to give him "staying power". It ought to aim at fortifying him against disappointment and giving him the spirit to withstand temptations to slackness, so that he may keep his head above water during his early years in the profession. This means that the Normal school should concern itself with the social "Why" of education as well as with the technical "How" of teaching. If the teacher appreciates his task as an educator, and realises the significance of the school in the life of the community, he may become proud of his vocation and resist temptations to bring discredit upon it.

We are aware that such a view of the training of teachers may be interpreted as encouraging the provision of academic lectures on History of Education, Sociology, Psychology and Ethics. Such academic instruction would be inappropriate in normal schools, if only because of the meagre academic qualifications required for admission. But, even so, these young teachers should know something of the history of their own country and its educational effort, should make some attempt to grasp the social problems of the local communities which they will serve and should be encouraged to understand the nature and needs of young children as well as the techniques of instructing them. Further, students in normal schools should derive from their training some principles and motives which will encourage them to take an ethical view of their vocation.

We should not expound this view of the function of the normal school if we had not been encouraged by seeing it worked out, at any rate, in part, in one or two of the existing institutions. In these normal schools, there is an attempt to develop the cultural and sociological experience of students, as well as to give them sound instruction and practice in the Arts of Teaching.¹

Another observation was that, as there is a gap of one to two years between the minimum age prescribed for admission to a normal school and the age at which the normal boy passes the qualifying examination for admission, many are lost to the profession. Hence, the Report suggested, that the age of admission be the age at which an ordinary boy would complete the middle or lower secondary course and the training course be lengthened to three years instead of the prevailing two. Thus, the pupil would be able to continue with general education along with professional training, and there would be more opportunity for "character training". Messrs Abbott and Wood emphasised the need to arrange refresher courses for practising teachers. Nevertheless they warned against conceiving a refresher course too narrowly. The purpose of such courses was to bring practising teachers together for instruction and reputation. And as the report put it, "it must recall him (the teacher) to a world wider

1. Government of India. *Abbott-Wood Report*, 1937, p. 25.

than that of the school and so link him up again with the interests of society at large." This last point is very important. There must surely be in India, people of good-will and distinction, not directly connected with education, who would be willing to attend refresher courses for the purpose of living with teachers for a few days and talking to them about experiences and issues in a way which would release them from too narrow a concern with their own problems and relate them and their vocation to the world at large. "This kind of instruction and stimulus given after the teacher has been at work for a few years, is the other half of training."¹

This was the first time that any report had thought in terms of the need for the teacher to have an understanding of and an insight into his social responsibilities in wider terms than that of mere passing on of information. The report also proposed that a Vocational Teachers' College be established to prepare teachers for vocational courses. But, it was of the opinion that the existing training colleges could also be utilized for the earlier part of training vocational teachers.

Meanwhile, with the Congress Ministry taking over in many provinces, Basic Education suddenly flashed on to the educational sky. Basic training schools began to crop up in most provinces in the North. A Basic Training College was established in Allahabad in 1938. But the fountain of inspiration was Wardha and the Vidyamandir Training School opened in 1937-38. It ran the full course of three years, a short one of one year and an even shorter one of six months. Teachers already trained in normal schools were drawn to it as there were plans to re-organize all primary schools on the Basic pattern.

The course, obviously emphasized craft-work and instruction was imparted on the methods of correlating school subjects to the main craft. Though basic schools and training fell into oblivion soon after, the seed was sown for post-independent expansion of the pattern.

Another significant event during this decade was the establishment of the first, full-fledged training institution for Nursery School Teachers. In 1936, Madras opened the Baler Kalvi Nilayam. It received a further impetus by the visit of the celebrated educationist, Maria Montessori, in 1939.

Thus, by 1940, the basis for Basic Education was laid; six universities were awarding post-graduate degree in education; the courses for B.T. and L.T. read very much as they do today even after 20 years of feverish activity in the field; and pre-primary Teacher Education was gaining attention.

THE MOMENTOUS FORTIES

The Forties were fateful for the world as a whole. The Second World War, its aftermath, decolonization and weakening of imperialism, the urge for independence among Afro-Asian nations, were all events which shook the entire world. At home, the Quit-India Movement, the gaining of Independence, the Partition and its repercussions, made this decade most memorable, as well as the most difficult.

1. *Ibid.*, p. 17.

Yet, within these ten years, 46 new training colleges were set up. Rajasthan had its first training college in 1941—the Vidya Bhawan Teachers' College which developed into a premier teacher education institution subsequently. Panjab inaugurated a two-year training course in Arts and Crafts for high school teachers. The Tilak College of Education was established at Poona in 1941. The same year saw Bombay take the lead in instituting a doctorate degree in Education.

A training school for Industrial School Teachers was instituted in Andhra—the first of its kind—in 1942. Another major event was the starting of regular courses in Basic Education for trained and experienced graduate Teachers by the Hindustanee Talimi Sangh, Wardha. Bengal started forming primary training centres attached to high schools and served economically the purpose of primary training school. The Spence Training College, Jabalpur, added a Department of Basic Education, and other noteworthy institutions started during this decade were the Central Institute of Education, Delhi, Maharani Laxmibai College for Physical Education, Vinay Bhavan at Viswa-Bharati and Training of Teachers in Hindustani Music at Morris College, Lucknow. In 1946-47, an Emergency Secondary Grade Training Course of one year started functioning to bridge, as far as possible, the gulf between supply and demand.

The Sarvodaya Mahavidyalaya in Bihar had a Social Education Workers' Training Institute attached to it to try experiments in the training of rural teachers. Bihar, too, had started a "Progressive School" which was having an impact on the educational system.

The pre-primary teacher training also was gaining ground. Kindergarten and Montessori training was given in separate institutions as well as in training schools intended for teachers of higher levels.

Other measures for teacher improvement were also being followed vigorously. Refresher courses in up-to-date methods, techniques of teaching and organizing physical and extramural activities were becoming more frequent. Uttar Pradesh sent out mobile squad of instructors to give on-the-spot orientation courses to teachers.

Meanwhile, the Central Advisory Board of Education had appointed a Committee to consider the question of 'Training, Recruitment and Conditions of Service of Teachers'. It once more repeated in strong terms, the age-old recommendation that every teacher must be trained. It exhorted the authorities to work out a progressive programme for ensuring that all teachers in their schools become trained within a specified period. The minimum qualification felt necessary even for Nursery and Infant School Training was Matriculation or its equivalent and the minimum age for admission to a training course, sixteen. For high schools, graduates were considered imperative. The length, of course, for middle or Senior Basic type, where specific importance was to be attached to craft training, to skill in craft and correlating other subjects to it, was to be three years,

though it could be reduced to $2\frac{1}{2}$ years, if necessary. A year may be made to do for graduates, though 18 months was preferable. For primary and nursery teachers, a two-year course was suggested.

To familiarize the teachers with realistic conditions, the Committee strongly favoured practice teaching in ordinary schools. It also outlined in detail the context of the course, time to be allotted for each aspect of the training, etc., with special reference to Senior Basic, Middle and Anglo-Vernacular Middle Schools.

The Committee thought it essential that special courses be provided for teachers of Art, Craft, Music, Physical Education, etc. It re-emphasized the importance of refresher courses at frequent intervals. It recommended that facilities be provided to teachers to visit other areas, to observe work done in comparable institutions or study new experiments. It also advocated the grant of study leave so that the teachers may keep abreast of the latest developments in their subject areas.

Another milestone in the educational history of India is the publication of the Sargent Report. It planned a phased programme of teacher Education for the coming 35 years. It agreed on all main points with the recommendations of the Committee on Teacher Training. For recruitment of better personnel to the profession, it suggested a scheme in vogue in England. Children attending the last two years in high school, who expressed a desire to teach, it said, could be selected for observation and "try-out". They should be taken on visits to other schools, and given opportunities to try their hand at teaching at times. They were to receive special stipends even during that period and be sent to normal schools after the completion of their High School Course.

While a two-year course was to be considered the normal one, it proposed that students who showed special aptitude for craft may be selected for a third year course to equip them for Senior Basic Schools or as craft teachers in high school. The Report strongly emphasized that the training institutions should not be too large—nor too small, due to economic reasons. A reasonable size seemed to them to be 300 pupils, 150 entrants a year, for two years.

In spite of the partition and the upheavals occasioned by it, the country had already made an amazing recovery by 1949. Many training colleges and schools were opened before the end of the decade and other educational activities too went on at a faster pace. The Government Training College at Allahabad changed its functions completely and was converted to the Central Pedagogical Institute, charged with preparation of syllabi for educational courses.

In 1948-49 too the University Education Commission submitted its report. It summed up the existing conditions in teacher training, which had, by now, achieved a certain appearance of uniformity. The compulsory papers usually were Principles of Education, Methods of Teaching, History of Education, and School Management and Hygiene. Educational Psychology as a separate paper had yet to

gain a place in most universities. Scope for specialization was provided in two or three areas and practical work including demonstration and criticism lessons, was compulsory. The number of required lessons during the sessions varied from 10 in one university to 60 in another. The Commission observed that the training colleges had no basic orientation to the essentials. It appealed to the staff and educationists to think out and plan adequately, with clarified objectives and clearer insight into the desired and the possible national and social contexts. It also exhorted the training colleges that theory should not be divorced from practice, but both have to go hand in hand.

The last year of the decade—1950—saw a feverish increase in activities. The First Conference of Training Colleges in India met in Baroda. The Conference made a historical survey of training colleges, discussed courses and functions, made many recommendations. Above all, it created a platform for the training colleges to come together, exchange views, air opinions and grievances, share problems and seek solutions together.

The Inter-University Board resolved, at Rangoon, that courses in Education be organised for university teachers. Many universities revised their courses, adding new subjects and deleting a few of the old. A Psychology Wing was added to the Central Institute of Education to conduct research, prepare mental tests and guide pupil-teachers to gain an experimental attitude, thus adding a new dimension to the image of a model training college. Thus, the new decade was faced with eager enthusiasm in the first flush of exhilaration and joy of a people who had just begun to feel they were masters of their own destiny.

THE PLANNING FIFTIES

The Fifties were the years of Planning. The year 1950-51 ushered in the first Five-Year Plan. True, in the field of teacher education, it held out no promises or visions, it just mentioned in passing that the position was highly unsatisfactory, facilities inadequate and area important.

The emphasis was on Technical Education and Basic Education. The whole decennium is really a record of expansion rather than of any startling or creative new trends. New ventures were sporadic. In-service training at secondary level was introduced on a fairly large scale all over the country. Orientation to Basic Education and conversion of normal schools and even post-graduate institutions to Basic Training Institutions progressed at a considerable pace—A noteworthy institution was Sri Govind Rao Korgaonkar Institute of Rural Education established in 1952 at Kolhapur to meet the training requirements for rural teachers.

The Central Institute of Education performed pioneer service in infusing new life and giving a new concept to teacher education at secondary level. The emphasis on a rich programme which considered

co-curricular activities on a par with academic work, or in other words education as an enrichment of total personality, began to find some favour with a few sister institutions also. The Ford Foundation located on the premises of the Bikaram Basic Training Centre, Bihar, helped in training teachers with sympathetic understanding of and clearer insight into rural uplift plans.

Meanwhile, the Second Conference of All-India Training Colleges meeting at Mysore in 1951, abandoned "Training" for "Education". This was but a symbol of the new vision which perceived teacher preparation in a broader and more comprehensive scheme than heretofore. It also bespoke the gradual grouping towards flexibility, experimentation and bolder imagination. Mysore organised for the first time in 1951, a six-week summer course in education for college teachers.

The syllabi underwent quite a few changes. Many more subjects were offered for specialization; number of papers and practical work were on the increase; Educational Sociology was introduced at least in one university at M.Ed. level, as early as 1951.

From 1952 onwards, workshops, seminars, conferences, etc. became far too common to be enumerated separately. The Vindhyha Pradesh organised an intensive theoretical and practical training for untrained teachers at eight zonal centres during autumn break. This was continued in Summer Vacation, followed by a final test which entitled the candidate to a certificate.

There were also attempts to re-train teachers for new subjects introduced in the schools. The shorter time given to English posed fresh problems. The training colleges ran short-term courses to tackle these. The colleges also took to research seriously. The Ministry of Education gave grants to a number of institutions to carry out investigations.

The major event of the decade was the Report submitted by the Secondary Education Commission, which came out in 1953. It once again drew attention to the poor quality of teaching and started new problems due to the new subjects and courses recommended. The reorientation in syllabus and evaluation techniques, and the shift in emphasis made the old training obsolete. It also called for more capable, intelligent, creative individuals in the teaching profession, who would be able to work with vision and insight. The integration of subject areas it envisaged, threw out a challenge, a task which has still not been accomplished by our educationists.

Obviously, such a situation cried out for remedial measures. The sporadic refresher courses run here and there by a few training institutions, were now given a fimer "habitat and name." The Extension Service centres began to be added to secondary training institutions, to provide re-training and in-service training. The First Seminar on Extension Services was held at Hyderabad in 1954. The Ford Foundations and the U.S. Technical Co-operation Mission helped in founding and expanding Extension centres.

An invaluable service rendered by such centres was the close contact it brought about between Training College Staff and School Staff. Within a year, 24 centres were working in different parts of India. The Central Advisory Board of Education also thought out proposals for successful implementation of the Mudaliar Commission's recommendations, in its 21st meeting held in 1954. The Board spelt out the role the training colleges could play and threw out many valuable suggestions.

In 1955, the All-India Council for Secondary Education was set up to co-ordinate, facilitate and guide the changes due to be brought about by the new scheme of secondary education. It set to work at once and started organizing seminars for principals of schools and training colleges. Two years later, in 1957, the All-India Council for Elementary Education was formed.

When the Second Five-Year Plan was launched in 1955-56, the significant role played by teachers in any developmental scheme was not yet fully realized. The plan envisaged that 68% of teachers would be trained by 1960. The Ministry of Education had a programme for training 500 degree teachers and 1,000 diploma teachers for multi-purpose and junior technical schools. As the target of the previous Five-Year Plan had not been reached, the Second Plan earmarked Rs. 17 crores for increasing training facilities.

Expansion was rapid both in the number of new institutions and new types of activities by old institutions. The All-India Council for Secondary Education set up an Examination Reform Unit. Science clubs began to be the "fad" in many schools. The Directorate of Extension Programmes for Secondary Education was formed in 1959 to centralise and co-ordinate extension activities.

The Central Institute of English was established at Hyderabad in 1958, to carry out research and train teachers in the troublesome area of English teaching in Free India. The CABE at its Madras meeting demanded that principals of higher secondary schools be M.A./M.Sc. with B.T. The Central Institute of Education launched a new project—"Reading for pleasure"—which has nearly become a separate unit since then and has developed into the "Reading Project" doing yeoman service. Panjab made a momentous decision not to allow arts colleges to attach Training Departments. A training institution for Arts and Crafts teachers was opened in the West Bengal.

Thus, the story of the Fifties is one of expansion and consolidation, with furious activity spreading out in all directions. The stage was now set for closer collaboration and better co-ordination.

THE SIXTIES

If the Fifties was the decade of the Secondary Education, the Sixties may rightly claim to be the decade of Elementary Education. Though no major single effort comparable to the Mudaliar Commission on Secondary Education has been undertaken, many conferences,

seminars and workshops have concentrated during the past six years to bring about improvements in Elementary Teacher Education.

The First National Seminar on the Education of Primary Teachers in India met in October 1960. It reiterated that every teacher at the primary level should be trained and called upon the State Governments to draw up a phased programme to reach this target within 10 years. It also requested steps to be taken for all training schools to be converted to Basic Pattern by the end of the Third Five Year Plan. It put forward the idea of selecting some training institutions to develop them as experimental schools for qualitative improvement of primary teacher education.

The optimum size for a training institution was suggested as 200, with 40-50 students in each class, when there were two sections each for first and second years. It also advocated the extension of Extension Services to include primary school teacher. The other major recommendations were setting up Study Groups on Elementary Education, introducing Orientation Courses for Teacher Educators, shorter courses for older, experienced teachers who are untrained and the establishment of State Institutes of Education. The Seminar also laid down major items in curricula, including theory and practical work and outlined proposals to improve evaluation in training schools.

The very next year, 1962-63 saw the recommendations well-started towards fulfilment. Extension Training Centres started functioning in primary teacher education institutions, and it was expected that by the Fourth Plan period, 25 per cent of institutions would be covered by it.

In 1963, too, the Study-Group on the Training of Elementary Teachers in India publicized its Report. It had gone thoroughly into all aspects of the problem and made many major recommendations. The Group was concerned about the large backlog of untrained teachers who vitiated all efforts towards modernizing education. As all of them could not be expected to undergo a full-fledged training course for two years, it worked out in more concrete terms the idea given by the first seminar. It suggested 3 types of courses—in-service training of 5 to 6 months supplemented by 3 months' courses every 3 to 5 years for those teachers above 35 and who had taught for more than 10 years; those below 35 and had served for more than 5 years may attend a one year course and the others must undergo full training. The Group recommended that every State should prepare phased programmes for clearing backlogs by 1971, and all new appointments should be confined to trained teachers.

It also recommended correspondence courses for experienced, untrained teachers, supplemented by short term courses for practical work. It repeated the First Seminar's proposals for setting up State Institutes of Education and State Councils of Teacher Education.

Within two years, many of these recommendations were given concrete shape. The State Institutes of Education came into life ; a Department of Teacher Education was opened by the National Institute of Education, which concentrated on improvement at Primary level ; Seminars and Workshops met frequently to consider ways and means to bring primary teachers together, to do further research in primary teacher education, improve the curriculum at the training institutions and breathe fresh life into teacher education programmes as a whole.

The Pre-school Teachers also began at long last, to get the attention they deserved. The Child Study Unit established as part of the National Institute of Education, instituted in 1962 a one-year course in Early Childhood Education, awarding a Diploma of its own. The trainees are highly qualified, in many cases having even University degrees.

This rush of activities was not confined to Elementary Teacher Education. Secondary Teacher Education too was forging ahead, though not breaking much new ground.

An important innovation has been the inception of Correspondence Courses to clear the backlog of secondary school teachers. The course is for 18 months, supplemented by summer courses emphasising practical work. The Central Institute of Education has also begun a 2 year part-time evening course leading to M.Ed. degree.

A recent major event has been the establishment of the four regional colleges of education at Ajmer, Bhopal, Bhuvanewar and Mysore, to serve the four zones into which India was divided for educational convenience. These colleges were specifically meant to integrate professional and general education programmes. The wheel had turned full circle, beginning in late 18th century with general education dominating and professional subjects trailing behind as a poor relation ; through 19th and early 20th century, when both got separated and pedagogics came into its own ; to the latter half of the present century, when a reconciliation and rapprochement between the two are being attempted.

These colleges are specifically meant to supply the lack of personnel in multi-purpose schools and focus on Science, Technology, Fine Arts and Commerce. The integrated 4-year teacher education programme had already been successfully tried out by the Kurukshetra University, since the end of the last decade, but the regional colleges have served to give the programme status and official blessing.

The significant trend in the sixties has been the movement towards collaboration and integration. The formation of the National Council of Education Research and Training and the amalgamation of various central and national institutions to form the National Institute of Education was but the first step in this direction.

Another notable landmark is the setting up of the Centre for Advanced Studies in Education in the Faculty of Education and Psychology at the Maharaja Sayajirao University of Baroda. This is the only Centre for advanced research in education, set up by the U.G.C.

The Baroda Study Group on the Education of Secondary Teachers in India made many recommendations, which were adopted almost in toto by the Seventh Conference of All-India Association of Teachers Colleges in June 1964. A notable proposal was that of establishing comprehensive colleges, which would bridge the gulf between primary and secondary teacher training and eliminate the class-consciousness at both levels.¹ It would certainly enrich the experiences of both student-teachers and teacher-educators; give the primary teachers a new sense of worth, dignity and belongingness; and give the secondary teachers a better understanding of the importance and nature of the foundations on which they are to raise the edifice.

The very alteration in name adopted by the All-India Association of Teachers' Colleges is suggestive of this new consciousness of the need for integration of all the levels of Teacher Education. The newly-constituted Indian Association of Teacher Educators breaks down all barriers and is an open forum for all teachers, of teachers at all levels.

The setting up of the Education Commission by the Government of India, was but a fitting climax to these new trends gathering momentum, since the urge for national integration began. This was the first commission assigned the gigantic task of surveying the whole field of education as a "gestalt", and not in bits and pieces which are to fit as best as they can, in all ill-assorted jig-saw puzzle pattern. The Commission has endeavoured to relate all aspects of all levels and types of education into a meaningful whole, which would help the country in its march of progress towards a glorious future. Only that future can pronounce verdict on the adequacy or inadequacy of the measures we are promoting in the present.

1. S.N. Mukerji, ed. *Report of the Study Group on the Education of Secondary Teachers in India*. Delhi, All-India Association of Training Colleges in India, 1964, Chapter IV. Hereafter cited as the *Baroda Report*.

PART ONE

THE TRAINING OF ELEMENTARY TEACHERS

Chapter

2. Organisation of Elementary Teacher Training
 3. The Training Course for Matriculates
 4. The Training Course for Middle Pass Candidates
 5. State Institutes
 6. In-Service Education
-

The majority of teachers of elementary schools of this country are either Middle Pass or Matriculates. They receive their professional education and training in normal schools for a period of one/two years. The programme of instruction and the duration of the course is however not uniform. They vary according to States. A few graduates are also employed in elementary schools of some States. But they are mainly trained in secondary teachers' colleges.

A recent experiment is the establishment of a State Institute in each State. These are financed by the Ministry of Education. They have a four-fold programme, viz., instruction, research, extension and publication.

Another important development is the organisation of the Extension Services Department in a few selected training/normal schools in cooperation with the Department of Basic Education of the National Council of Education Research & Training.

2 ORGANISATION OF ELEMENTARY TEACHER TRAINING

H.B. Majumder

INTRODUCTION

The origin and the development of teacher training have been discussed in detail in the first chapter. The present chapter aims at summarising briefly some of the developmental trends in the training programmes in addition to presenting a comprehensive picture of the existing position of elementary teacher training in the country. The paper is based on the latest information collected from the State Departments of Education, a study of the reports of different committees, seminars and study groups on the training of elementary teachers in India and other relevant literature on the subject.

DEVELOPMENTAL TRENDS

Institutions for the training of teachers in this country were established as the beginning of the nineteenth century, interestingly enough, not as an attempt to improve the methods of teaching nor to meet problems of educational expansion, but mainly to introduce new content in the primary schools with a view to preparing cogs for the lowest ranks in administration. The training of primary teachers at that stage was identified with the furthering of this general education for orienting them to the subject-matter of 'Western science and literature'. Pedagogy was conspicuous by its absence in the training programmes at this stage.

During the first quarter of the present century, the methodology of teaching began to come into prominence and rudiments of principles and practice of education found a place in the curriculum. The course consisted of considerable drill in method, intensive practice teaching and practical lessons on drawing, map and globe reading. Teacher training at the elementary stage, however, received new dimensions alongwith the introduction of Basic Education.

The birth of Basic Education in 1937, heralded a new era in education in India. It revolutionised the very concept of education by bringing the child to the forefront and by recognising its needs and interests in the process of his development. Basic Education envisaged

an integrated curriculum woven round the fabric of actual life experiences provided through various activities relating to productive and socially useful work, and socio-physical environment of the child. For the first time a programme of education for life and through life—a programme of life-centred education was presented to the country. The teacher training obviously could not remain aloof from the currents of these novel ideas on education and in order to provide teachers for the implementation of this system, a new type of training institutions was born. Teacher preparation began to be viewed as education aiming at developing the teacher as a productive citizen of a democratic and cooperative social order, as a social engineer directly charged with the responsibility of changing society through education; as an integrally developed individual capable of transmitting culture and as a skilled professional person capable of imparting education best suited to the needs of children as members of the newly conceived social order. The entire approach to teacher education thus changed in content and organisation and the training institution came to be viewed as a social laboratory, a productive and co-operative community besides a pedagogical institution.

During the post-independence period, with the expansion of elementary education, elementary teacher training entered an era of mass expansion. Consequently, teachers with even inadequate academic preparation had to be recruited bringing in its sweep the great need to provide preparation in the subject content along with pedagogy. This change in the trend can be traced in the reports of the seminars, study groups and committees on elementary teacher preparation which were held during the past decade.

The development of teacher training in most of the countries has followed almost identical cyclic path, India being no exception to it. It is noticed that to start with, the programmes of teacher preparation emphasised subject content. Then the emphases shifted in turn from content to methodology, from methodology to psychology (child study), from psychology to measurement, and from measurement again to the subject content. In our country only one link in this chain, *i.e.*, measurement, is missing which may be due to the conspicuous absence of educational research and consequent non-availability of the necessary evaluative tools.

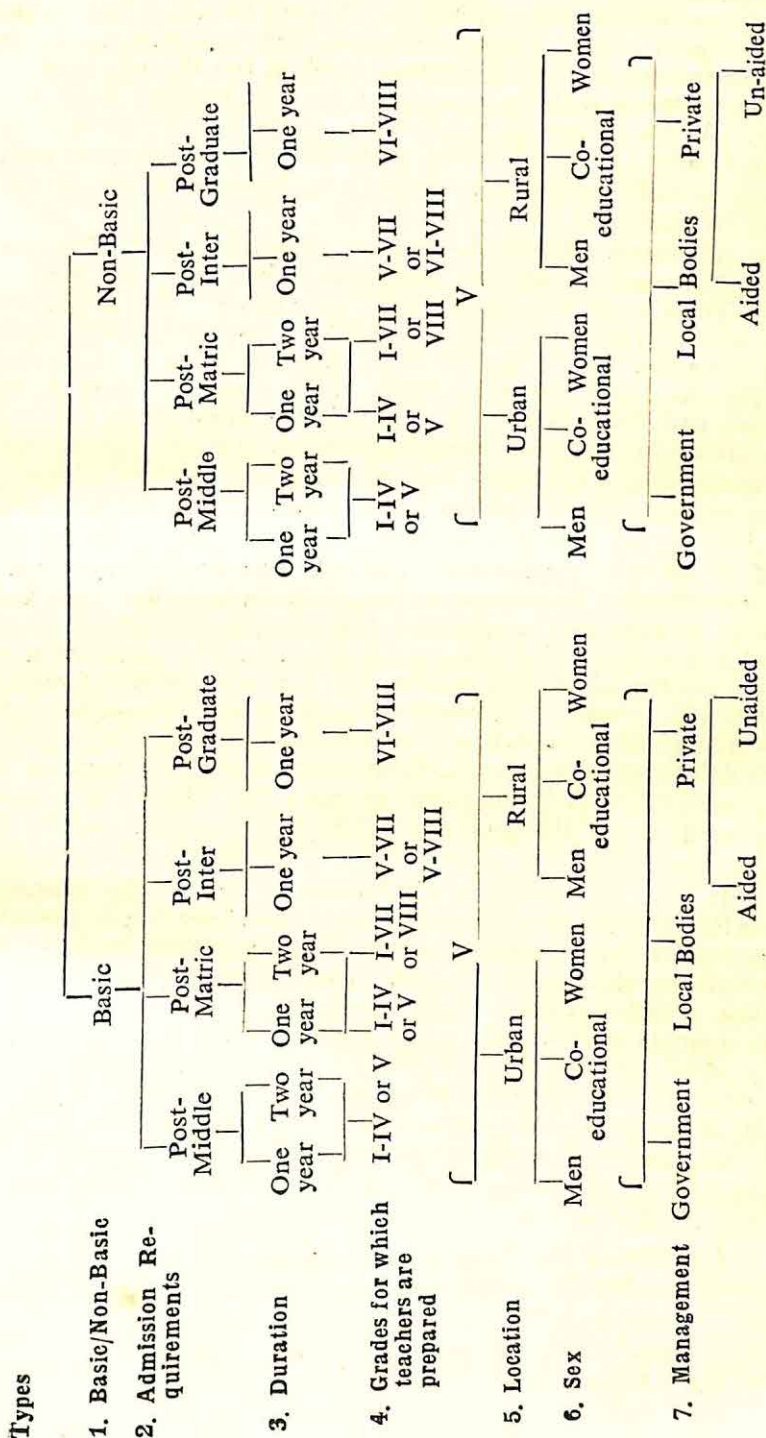
With this perspective in the background, let us now analyse the organisational pattern of the teacher preparation at the elementary stage as it exists today.

PRESENT SCENE

Types of Training Institutions. Types of training institutions preparing teachers for elementary schools vary from State to State as well as within the State itself according to their Basic and non-Basic character, duration of the course, admission requirements for the course, location of the training institutions, managements running them, the classes for which it prepares teachers etc. Diagram 1 indicates

DIAGRAM I

Types of Training Institutions Preparing Teachers for Elementary Schools



the different types of training institutions engaged in the preparation of elementary teachers. In general, teacher training institutes are of two types—Basic and non-Basic. It may be noted that in spite of the accepted policy of the Union and State governments to organise teacher training at the elementary level on the Basic pattern, in some of the States non-Basic elementary teacher training institutions still exist. As a corollary to the decision of the Union and State governments to adopt Basic education as the pattern of elementary education, all the training institutions should have been converted to the Basic type by now.

Admission Requirements and Duration of the Courses. The admission requirements and duration of the courses are also not uniform. These have been detailed in Appendix I. It will indicate that admission requirements of the elementary teacher training institutions and duration of the course vary not only from State to State but within the State as well. Only in the States of Bihar, Kerala and Panjab and Union Territory of Delhi, the situation in this respect is in conformity with the recommendations of some of the important study groups, committees and seminars on teacher education. In other States, if the duration of the course is two years, then admission requirement is a middle pass, while in others if admission requirement is Matriculation, then duration is only one year. In certain States, the qualification for admission to the training course is relaxed in the case of women and candidates belonging to scheduled castes and scheduled tribes. The present situation in this connection may be due to the limitation of resources and non-availability of matriculates in sufficient number. In view of the expansion of secondary education resulting in the availability of matriculates in sufficient numbers and the role of teacher education in the ultimate improvement of elementary education, it is desirable to raise the admission requirements universally to the Matriculation (with rare relaxation) and the duration of the course to two years.

It may be noted (See Appendix I) that all the States except West Bengal and Uttar Pradesh require Matriculation as the admission requirement for training teachers for the middle grades. A trend has however developed in recent times to appoint graduate teachers in the middle schools. This would require raising the admission requirements to University graduation. In this connection it may be pointed out that the post-graduate basic training colleges have the responsibility to train graduate teachers for teaching in classes VI-VIII. It may also be pointed out that the Syllabus Committee¹ has also recommended a special course for graduate teacher for specialisation in the elementary field. It may also be noted that the nomenclature of the courses lacks uniformity and thus results in confusion.

Location of the Training Institutions. The distribution of the training institutions at the elementary level in different States is rather

1. NCER & T. *Report of the Committee to Evolve Model Syllabi for Elementary Teacher Education*, Delhi, 1965, p. 187. Hereafter cited as the *Mukerji Committee's Report*.

intriguing. The majority of them are situated in the urban or semi-urban areas, Assam, Bihar, Kerala and West Bengal being exceptions. In a country like ours, where about 70 per cent of the elementary teachers would have to work in the rural areas, it is desirable that they should receive training in an environment in which they would be called upon to work. This arrangement will acquaint them with the conditions prevailing in the rural areas and help them gain first-hand experience of the needs and problems of the rural community. This will also help in retaining the rural youth in the rural areas to some extent for their own development and also help in developing proper attitudes needed of rural teachers. Steps may be taken to implement the recommendations of the First Study Groups on the Training of Elementary Teachers in this respect.¹

Managements. Elementary teacher training institutions in this country are, by and large, run by the government although some of them are run by private organisations both aided and unaided. Table 1 gives an idea about the managements which are engaged in the field of teacher training elementary schools in different States.

It appears from the table that training institutions in most of the States are run by the government, so much so that the percentage proportion of the government reaches to 100 in States like the Madhya Pradesh, while in other States private bodies seem to have been making a useful contribution. In the States of Maharashtra and Kerala, the private enterprise surpasses even governmental efforts. In a developing country like ours, the need for exploring maximum possibilities of involving private enterprise in promoting education in general and teacher training in particular assumes great importance. This, however, does in no way rule out the need for a greater involvement of the government in this task, because of the vital role that education plays in the national development and because of the constitutional directive for providing universal education for the age group 6-14.

1. Ministry of Education : *Report of the Study-Group on the Training of Elementary Teachers in India*, New Delhi, Ministry of Education, Government of India, 1963 p. 45.

TABLE 1
ELEMENTARY TEACHER TRAINING INSTITUTIONS BY
MANAGEMENTS, 1966
 (Number and Percentage)

Sl. No.	Name of State/Union Territories	Government	Local Board/Municipality	Private	Others	Total
1.	A. STATE					
1.	Andhra Pradesh	97 (71.3)	—	38 (28.0)	1 (0.7)	136
2.	Assam	35 (86.4)	—	3 (7.3)	3 (7.3)	41
3.	Bihar					122a
4.	Jammu & Kashmir					12b
5.	Kerala	31 (29.7)	—	73 (69.4)	1 (0.9)	105
6.	Gujarat	39 (50.0)	1 (1.3)	38 (48.7)	—	78
7.	Madhya Pradesh	106 (100)	—	—	—	106
8.	Madras	78 (56.5)	—	60 (43.5)	—	138c
9.	Maharashtra	61 (19.9)	2 (0.3)	236 (75.9)	12 (3.9)	311d
10.	Mysore	34d (47.2)	—	35 (48.6)	3 (4.2)	72c
11.	Nagaland					3a
12.	Orissa	90 (96.8)	—	—	3 (3.2)	93
13.	Panjab	99 (52.2)	—	91 (47.8)	—	190
14.	Rajasthan	48 (67.3)	—	3 (5.8)	14 (26.9)	65
15.	Uttar Pradesh	180 (68.4)	1 (0.4)	45 (17.4)	37 (14.8)	263
16.	West Bengal	53 (68.8)	1 (1.3)	23 (29.9)	—	77e
	Total	951	5	645	74	1812
1.	B. UNION Ter.					
1.	A.N.Island	1 (100)	—	—	—	1
2.	Delhi	—	2 (66.7)	—	1 (33.3)	3
3.	Goa, Daman & Diu	1 (33.3)	—	—	2 (66.7)	3
4.	Manipur	6 (100)	—	—	—	6
5.	Tripura	4 (100)	—	—	—	4
6.	Pondi-cherry	2 (100)	—	—	—	2
	Total	14	2	—	3	19

(a) Separate break-up of these figures is not available.

(b) Figures relate to the year 1960-61.

(c) Figures relate to the year 1964-65.

(d) There are facilities for nursery teacher training in 3 institutions.

(e) Figures relate to the year 1963-64.

RELATIONSHIP OF ELEMENTARY TEACHER TRAINING INSTITUTIONS WITH THE STATE GOVERNMENT AND OTHER EXTERNAL AGENCIES

Relationship with the State Government. Since education is a state subject, the States formulate general policies regarding teacher training keeping in view their local needs and resources. Generally speaking, at present, the States have full administrative, academic and supervisory control over both government and non-government institutions. They control finances, decide the extent of financial assistance to the students, prescribe rates of tuition fees, extend recognition and provide grants-in-aid to private institutions. They also determine the duration of the courses and admission requirements to the same, prescribe curricula and text-books, look after their supervision and administration, conduct examinations and award certificates or diplomas to the successful candidates. In view of the fact that there is no central control over elementary teacher preparation, courses and facilities vary from State to State. In spite of this diversity, however, there is some unity in the basic approach to teacher training throughout the country so far as the curriculum and techniques of teacher training are concerned on account of the declared policy of the governments that elementary education will be of the Basic type.

Relationship with the Universities. The universities in our country have, by and large, confined themselves to the training of graduate teachers for secondary schools only and have practically kept themselves aloof from elementary teacher training. The reason is not far to seek. The universities have so far concerned themselves with post-matriculation education and higher learning. Since admission requirement to the training institutions in most of the States has not so far been even a pass in the matriculation examination, universities have not considered it worthwhile to take up this additional responsibility of training a vast army of teachers for elementary schools. With the increased output of matriculates in the States and increased number of universities, and also by decreasing their geographical jurisdiction, it may now be possible for them to associate themselves with the preparation of elementary teachers thereby raising its status and standard.

Relationship with the State Institute of Education. The establishment of State Institute of Education in the different States at the instance of the Government of India has opened a new chapter in the history of education of our times. Formerly, there was no organisation or academic body which had the direct responsibility of developing elementary teacher training. The State Institutes of Education will now provide the necessary leadership to the training institutions so that they can fulfil their tasks. They will work with teacher educators at the elementary level for this improvement of curricula, techniques of training and other ancillary matters directly related to teacher education. It is hoped that this measure will go a long way in modernising our teacher preparation at the elementary level and

help the training institutions in preparing teachers best suited to the needs of our time.

Relationship with the National Institute of Basic Education. In this connection it is also worthwhile to point out that the National Institute of Basic Education was established by the Ministry of Education, Government of India in 1956 with a view to promoting Basic education and helping in its growth and development. The role and functions of the State Institutes of Education and National Institute of Basic Education are almost identical. It is hoped that these two institutions and the Department of Teacher Education, recently established as a wing of the National Institute of Education, will work in close coordination towards the improvement of elementary education in general and teacher education in particular.

FINANCING

Expenditure. The country spent Rs. 3,46,14,498 on the training of elementary teachers during 1960-61. This constitutes 2.9 per cent of the total direct expenditure on elementary education. The situation in this respect, however, varies from state to state, as is evident from the table 3 to follow :

TABLE 3

State	Total direct expenditure on the education of elementary teachers	Percentage of total direct expenditure on the training of elementary teachers to the total direct expenditure on elementary education
1. Andhra Pradesh	29,34,640	3.1
2. Assam	7,89,198	2.4
3. Bihar	53,35,980	7.0
4. Gujarat	19,94,476	2.6
5. Jammu & Kashmir	6,88,621	9.0
6. Kerala	9,41,900	1.0
7. Madhya Pradesh	33,92,489	3.7
8. Madras	3,53,393	3.1
9. Maharashtra	53,54,348	3.2
10. Mysore	16,68,543	2.1
11. Orissa	6,49,383	2.4
12. Panjab	7,34,957	1.4
13. Rajasthan	32,35,583	6.4
14. Uttar Pradesh	54,05,846	4.9
15. West Bengal	6,75,808	0.8
All Union Territories	4,49,333	1.3
Total India	3,46,14,498	2.9

The cost of teacher training programme worked out by the Study Group of the Training of Elementary Teachers comes to about 5 per cent of the total direct expenditure on elementary education.¹ The above table indicates that many States are lagging behind in this respect.

1. *Ibid.*, p. 42.

Sources of Expenditure. The entire cost of teacher training at the elementary level is borne by the State government. But there are certain voluntary organisations which maintain teacher training establishments from fees, contributions, and endowments. They may or may not receive government aid. In many States, training is provided free. But in some States tuition fees are charged although

free tuition is allowed in the case of special categories of trainees coming from backward areas, scheduled castes or backward classes. Central assistance is also available from time to time for development of special projects. The following table (4) indicates the pattern of financing and the per capita cost in different states.

TABLE 4
Sources of Expenditure for Elementary Teacher Training—1960-61
(Rupees in Thousand)

State	Govt.	Sources of expenditure				Total	Cost per trainee
		Local Funds		Fees	Other courses		
		Rural	Urban				
1. Andhra Pradesh	2,682 (91.4)	— (—)	— (—)	89 (3.0)	163 (5.6)	2,935 (100.0)	196.0
2. Assam	767 (97.2)	— (—)	— (—)	5 (0.6)	17 (2.2)	789 (100.0)	340.5
3. Bihar	5,219 (97.8)	— (—)	— (—)	— (—)	115 (2.2)	5,336 (100.0)	316.5
4. Gujarat	1,663 (83.4)	10 (0.5)	— (—)	180 (9.0)	141 (7.1)	1,994 (100.0)	243.7
5. Jammu & Kashmir	689 (100.0)	— (—)	— (—)	— (—)	— (—)	689 (100.0)	1,123.3
6. Kerala	736 (78.2)	— (—)	— (—)	185 (19.6)	21 (2.2)	942 (100.0)	163.6
7. Madhya Pradesh	3,421 (98.8)	— (—)	— (—)	23 (0.7)	19 (0.5)	3,463 (100.0)	648.5
8. Madras	246 (69.6)	— (—)	— (—)	6 (1.6)	102 (28.8)	353 (100.0)	115.6
9. Maharashtra	3,913 (76.2)	— (—)	52 (1.0)	669 (13.0)	503 (9.8)	5,138 (100.0)	273.7
10. Mysore	1,558 (93.4)	— (—)	— (—)	69 (4.1)	41 (2.5)	1,669 (100.0)	647.7
11. Orissa	639 (98.5)	— (—)	— (—)	— (—)	10 (1.5)	649 (100.0)	137.0
12. Panjab	588 (80.9)	— (—)	— (—)	108 (14.9)	31 (4.2)	727 (100.0)	246.9
13. Rajasthan	3,031 (93.7)	— (—)	— (—)	172 (5.3)	32 (1.0)	3,236 (100.0)	501.0
14. U.P.	5,103 (94.4)	— (—)	12 (0.2)	212 (3.9)	79 (1.5)	5,406 (100.0)	396.9
15. West Bengal	602 (89.0)	— (—)	35 (5.1)	16 (2.4)	24 (3.5)	676 (100.0)	242.3

A study of the above table reveals that :

1. On the whole, about 90% of the total direct expenditure on elementary teacher training is shared by the government and the remaining 10% is met from fees and other sources. Contributions from local bodies are negligible.
2. Contribution from private sources and community participation in establishing and maintaining training institutions is also not very significant.
3. Elementary teacher training is not free for all in some states.
4. The per capita expenditure varies from Rs. 137 to Rs. 1,123 and the average is Rs. 315. In this connection, it may be pointed out that the average per capita expenditure falls far short of the minimum of Rs. 1,200, calculated by Dr. S.N. Mukherjee on the basis of the recommendations of the Syllabus Committee for Teacher Education.¹ It is also interesting to find that the per capita expenditure also varies from institution to institution as revealed in the study of COPP team.² The wide range in per capita expenditure goes to suggest that the institutions in different states are at various stages of development.

Pattern of Expenditure. The usual factors determining the pattern of expenditure in teacher training institutions are (a) the salary scales of teacher educators, (b) stipends or scholarships awarded to the trainees, (c) freeships, (d) residential or non-residential character of the training institution, and (e) the physical facilities. Generally speaking, demonstration schools and extension centres are not considered as determinants for working out the cost of preparing elementary teachers, since they have not been reckoned uptill this day as integral parts of the training institutions. In order to ensure good quality, it is necessary to introduce optimum teacher pupil ratio, provide good salary scales for qualified staff, give stipends or maintenance grants to the trainees and provide the necessary equipment and facilities for instruction. A suitable cost pattern of elementary teacher training still needs to be evolved at the national level so as to guide the States in this respect. Research in determining the

1. S.N. Mukherjee : *Studies in Administrative organisation of Educational systems : Administration and Organisation of Teacher Training Institutions*. Department of Educational Administration, 1965, p. 32.

The per capita cost has been calculated on the assumptions :

- (i) It will be a two-year course, (ii) enrolment will be 200, (iii) Teacher pupil ratio will be 1 : 20.
2. Committee on Plan Projects : *Report on Teacher Training* : New Delhi, Planning Commission, 1964, pp. 190-191.

optimum requirements of the training institutions and financial allocations for the same is an immediate necessity.

A study of the pattern of expenditure of teacher preparation at elementary stage of different States indicates that there is a lack of uniformity in financial allocations to the various aspects of teacher preparation and that there is no liberal provision for maintaining libraries, laboratories, workshops and for maintenance and purchase of teaching aids.

The First National Seminar on the Education of Primary teachers in India summarises the situation in this respect in the following words.

The pattern of expenditure varies from state to state. It is noticed that in some states more than 80 per cent of the total expenditure is on account of salaries and allowances of staff and stipends to trainees. There are, however, states where it is in the neighbourhood of 50 per cent. These variations are bound to be there because of the differences in rates of stipends admissible to trainees and other factors. One thing which is noticeable in this respect is that the amount of expenditure on libraries, laboratories and equipment is usually low practically all over the country.¹

Such a situation is not necessarily conducive to maintaining the quality of the teacher preparation. It is, therefore, desirable that liberal grants should be given to the teacher training institutions to improve their libraries, laboratories, workshops, etc.

INSTRUCTIONAL STAFF

Staff Pattern. The pattern of staffing for institution depends largely upon two factors : (i) the teacher-pupil ratio and (ii) nature of the duties.

The teacher-pupil ratio in the training institutions at the elementary level varies from 1 : 10 to 1 : 40. It differs according to the method of calculation. Sometimes the principal and instructors of practical subjects are not included while calculating this ratio. The staffing of small institutions is a real problem. It has been found that in some training institutions there are two to three instructors including the headmasters who have to run the entire course in addition to teaching in the attached demonstration schools. Again in some cases it has been noticed that certain instructors in practical subjects do not have adequate work. We may recall in this connection the recommendations of the Syllabus Committee. In the opinion of this committee the size of the training institution

1. Ministry of Education : *Report of the First National Seminar on the Education of Primary Teachers in India*, Delhi, Ministry of Education, Govt. of India, 1961, p. 129.

should be between 160-200 for a two year course and the teacher-pupil ratio should be 1 : 10.¹ To ensure better quality it is necessary to organise instructional programmes in such a manner that there is maximum involvement of the student teachers in the learning process. This would require supplementing lectures by discussion groups, seminars and workshops necessitating the participation of the entire faculty. This approach to teaching demands staffing pattern in terms of the recommendations of the syllabus committee.

The load of work of teacher educators also varies from State to State. In almost all the training institutions, every teacher educator including instructors in practical subjects share some responsibility in organising community life activities which are integral parts of the training programmes at the elementary stage. In a few cases, teacher educators have to teach main or subsidiary crafts or both in addition to teaching pedagogy, and supervision of practice-teaching and other practical work. Besides this, they are called upon, in some cases to teach in the attached demonstration schools with the idea of maintaining intimate contact between theory and practice. This means a heavy load of work for teacher educators. In some states again, there are specialist teachers for practical subjects like Art, Crafts and Music and they do not have to participate in the teaching of pedagogical subjects. They also do not participate in the supervision of practice-teaching. As a result these instructors are not adequately employed, nor is it possible to make full educational use of the practical subjects. Still there are institutions where principals or headmasters do not get secretarial assistance for office work. Consequently, they have to look after various kinds of office work with the assistance of the lecturers. The principal, therefore, does not find time to participate in the instructional programmes or to supervise the work of his colleagues.

In a situation like this, it is necessary to define precisely the role and functions of each member of the staff and to prescribe the adequate quantum of work for them. There should be specialist teachers for practical subjects with training in pedagogy so that they can effectively participate in the total training programmes. In order that it is possible to make full educational use of crafts and other creative subjects, it is imperative for all the other teacher educators to have some experience in practical subjects so that they can effectively participate, in some form or other, in the teaching of these subjects.

Minimum Qualification—Experience and Salary Scales of Teacher Educators. The details of the minimum qualifications, experience of teaching and scales of pay of different categories of teacher educators in different States are given in Appendix 2.

Qualifications of the Instructional Staff. Almost all the States prescribe graduation with professional training as the minimum qualifications for the staff of elementary teacher training institutions.

1. *Ibid.*, p. 193.

It may, however, be pointed out here that majority of the teachers working in these institutions have training in secondary colleges and have practically little or no experience of teaching in elementary schools. We may recall at this stage that the post-graduate basic training colleges were established with a view to performing a major function namely preparing teacher educators for elementary and Basic education. In some States this function is still being performed, but the general pattern is that only trained graduates from the secondary training colleges are appointed on the staff of Elementary training institutions.

Professional qualifications and university graduation are not usually demanded of Art and Crafts teachers. In some states again the Basic trained graduates also share the responsibility of craft teaching. A few states, however, have made arrangements for the professional training of craft teachers. This appears to be a good practice, since it will enable the craft teachers to participate in the total programme of the training and will go a long way towards raising their status.

Salary Scales. Appendix 2 also shows the various salary scales of teacher educators as they obtain in different states. It will be seen that the scale of salary is the lowest in Kerala. In the States of Kerala and West Bengal the heads of the institution are in the same scale as lecturers, although in some cases special pay is admissible as in West Bengal. Since higher responsibilities are attached to the post of the principals, it is necessary to give them a higher scale. In Andhra Pradesh, there are two scales. It may be advisable to have some selection grade posts of the Principals and lecturers so as to give incentive for good work research and experimentation.

In some States again the scales of salary admissible to craft instructors are lower than those admissible to lecturers resulting in lowering of status of the subject itself. This is an undesirable state of affairs and requires rationalisation.

In most of the States, scales of salary for the staff of training schools are the same as those of the secondary school teachers. This might have been justified in the past when only middle pass candidates were admitted to the training course and its status was considered to be equal to that of a secondary school. Since the admission requirements of the candidates have been raised, it is justifiable that the status of the training institutions should be raised to that of at least intermediate colleges and pay scales of the teacher educators be made comparable with those of the lecturers. This will no doubt warrant improvement in the qualification of the teacher educators attracting better type of persons for the job and also resulting in the qualitative improvement of the teacher education programmes.

FINANCIAL ASSISTANCE TO THE STUDENTS

In some states, all the trainees receive financial assistance in the form of freeships or stipends or both ranging from Rs. 20 to Rs. 50 per month, while in others only certain categories of the trainees receive such assistance. The deputed teachers generally receive their salaries during the course. In order to encourage untrained teachers to receive training, it is necessary to give the teachers study leave with full pay or allow deputation without any loss of salary and allowances in addition to the stipends or maintenance grants. It is suggested that each trainee should be given a stipend or maintenance grant of at least Rs. 50 per month, that the rate of stipend should be reviewed every fifth year and that it should be increased in proportion to the rise in living cost.

PHYSICAL FACILITIES

Building. The position in regard to physical facilities available in the elementary teacher training institution is most disconcerting. This may be the consequence of the colossal expansion of elementary education during the last decade and a half. Provision of facilities for the preparation of suitably equipped teachers has not been able to keep pace with this vast expansion. Teacher training institutions have, therefore, to meet the greatest challenge confronting them due to this expansion and make bold strides to work for quality against heavy odds. In order that they can fulfil their task adequately, they would have to explore the possibilities of enlisting the best possible co-operation of their communities and to make the fullest use of the existing facilities. We must have to admit here that no educational plant, however good it may be, can function effectively unless the optimum facilities are available for its implementation.

While the majority of the training institutions in many States are housed in their own buildings, there are a few that are located in rented buildings. Some make-shift arrangements have been made with other educational institutions. For example, quite a large number of training institutions for elementary teachers in Punjab are located in secondary schools. Even the existing buildings need much improvement, most of which are either in dilapidated conditions or the accommodation is inadequate. For instance, in the State of Rajasthan, quite a few training institutions are housed in ancient forts which are hardly suitable for educational use.

It may not, however, be concluded from what has been discussed about the buildings in the preceding paragraphs that we are advocating for costly buildings. What is necessary is a good campus consisting of the minimum of accommodation, inexpensive yet functionally useful, simple but attractive and quite in harmony with the environment in which the training institutions are located. Where climatic conditions permit open air classes may be held under shaded trees

and verandahs also may be used for instructional purposes. Rooms should be put to multipurpose use not only for the trainees but also for the community members and especially for the teachers of the neighbourhood. Undoubtedly, research for designing buildings for the teacher training institutions suited to the needs of different environmental conditions is urgently needed. Here it may not be out of place to point out that the whole plant with its arrangement for sanitation, water supply, drainage, cleanliness etc., should set an example to the neighbouring community for better living. To maintain the building properly it is necessary that there should be adequate arrangements for its caretaking. It may be possible for the community members or the students to do something in this direction.

Accommodation for Staff and the Trainees. All the States, more or less, follow Basic education programme in the elementary teacher preparation. According to the principles of Basic education, a training institution is to be considered as a community of teachers and students. In order that these institutions can organise good community life, it is necessary that all the training institutions are residential in character both for staff as well as for students. But this principle of organising training institutions has not been put into practice in all the states. In some States training institutions are residential not only for the students but also for the teachers, while in others generally they are residential for the students and some members of the staff, particularly the superintendents of the hostels. There are a few institutions where no residential facilities are provided at all. The trend is, however, towards organising residential training institutions—residential both for the members of the staff and the students. It may, however, be pointed out here that generally the student-teachers do not get comfortable accommodation in the training institutions. The rooms are of the dormitory type in most cases and are shared by a number of trainees. This arrangement is surely not conducive particularly to intensive studies and serious work.

In the non-residential training institutions it is often difficult to organise an active, corporate and creative community life. This is a point which needs serious consideration for organising teacher training in this country. The case for residential training institutions is further strengthened by the fact that it is still not possible in many states to provide a course longer than one year because of the limited financial resources. Even two-year course is not considered to be adequate to give sound professional training to elementary teachers. The training, therefore, has to be intensive in character and for that, it is essentially necessary that the trainees and members of the staff live on the same campus. Then again there is a trend towards shifting a large proportion of training institutions to the rural areas where suitable accommodation is not available for the teachers. It is, therefore, necessary that accommodation should be provided to the members of the staff in the institution itself.

Other Facilities. Besides the facilities for accommodation mentioned above, some other very important facilities are required for effective organisation of the programmes for the preparation of teachers. Craft workshops, libraries and laboratories are of great significance among them.

In spite of the fact that craft occupies an important place in the curriculum of teacher training in almost all the states, it is curious to note that there are no craft workshops in a vast majority of the training institutions. The lecture rooms and sometimes the verandahs of the buildings are used for this purpose. It is a good practice to use the same room for different purposes and for converting 'auditorium' into a 'laboritorium' as and when occasion demands it. This practice gives the future teacher practical experience of organising instructional experiences by readjustment and of making maximum utilisation of the existing resources. But nevertheless we shall have to admit that for certain crafts like carpentry, smithy, metal work, etc. craft workshops are a real necessity.

So far as libraries are concerned, it appears that they are the most neglected items in the total organisation of the training school plant. It has been found that many training institutions do not have libraries at all and books are stored either in the office or the staff room. Even if they exist, their condition does not encourage the use of the library. They are the most unattractive places with poor reading-room facilities, unhygienic conditions and uncomfortable furniture. Probably we have been emphasising too much dependence on notes dictated in the classrooms resulting in the absence of urge in the students to turn to libraries. It cannot be over-emphasised that library can revolutionise teaching, as we all know good training always motivates students to use library. In a system of teacher training, which encourages the use of reference materials for planning, organising and evaluating practical work, a well-equipped library with a full-time librarian is most essential.

Almost all training institutions have some science apparatus, but they are mostly used in connection with practice teaching. There is hardly any provision for laboratory in the training institutions, for no content is usually taught particularly in the one year course. Now that we are emphasising the teaching of science right from the elementary stage, it is essentially necessary to set up laboratories in the training institutions where experiments can be demonstrated to the trainees and even performed by them. They are also considered indispensable for developing scientific and experimental attitude in the student-teachers.

Unfortunately experimental schools are conspicuous by their absence in our training institutions. However, demonstration schools are attached to a small number of institutions engaged in the preparation of elementary teachers. They are called demonstration schools for the simple reason that demonstration and discussion lessons for the trainees are arranged in these schools, while this task is done in

practising schools by the institutions which do not have demonstration schools. It is very necessary that experimental school should function as an integral organ of each of the training institutions, and serve as an educational laboratory to the staff of the training institution for trying out new ideas and conducting experiments and be used for organising demonstration and discussion lessons. Teaching in the experimental school provides to the teacher educators an insight into the problems of teaching, organisation and administration of elementary schools, helps them to test the validity of the ideas they often preach to the student-teachers and supplies to them the feedback which serves as a basis for developing in them, a particular line of thinking on various problems.

SOME PROBLEMS AND SUGGESTIONS

An analysis of the present situation of elementary teacher training in this country has revealed many inadequacies and areas needing special attention for improvement. The greatest problem that challenges us today is to provide sound and effective training to a vast army of teachers so that eventually, in the course of a decade or so, every class room in an elementary school has the trained teacher of the type that the country needs today. The role of elementary school teacher has changed considerably in recent times. The training institutions have to take note of this fact, to evolve a national pattern of teacher education and to help re-affirm our faith in teacher education. We cannot remain contented with the pre-service training of the teachers only. Every teacher has to be kept on a continuous process of growth. Elementary teacher training institutions have to increasingly work for quality so that teacher education can be raised to the professional status that it deserves. In spite of a huge backlog of untrained teachers, there is a national wastage to the extent of 25 per cent in the training institutions.¹ This paradoxical situation we must get over.

Problem of Numbers. The number of teachers to be trained for elementary education is simply colossal. At present we have about 6,22,105 trained teachers as against the total of 8,36,213 who are teaching in the primary grades. The similar figures for the middle stage are 4,56,456 and 6,44,247 respectively. Immediately, therefore, we have to make arrangements for the training of 2,14,108 primary and 1,84,791 middle school teachers in addition to the teachers needed to meet the demands of expansion of elementary teachers in the coming years. This is indeed a colossal task in view of the fact that the present intake capacity of 1,831 elementary teachers training institution is limited to about 1 lakh and 90 thousand only.

The position of back-log of untrained teachers varies from state to state, as the table that follows will show. Since the training

1. This percentage accounts for the students, who (a) leave the training course before completion, (b) does not appear in the final examination, (c) fail in the final examination. We should get over this paradoxical situation

TABLE 5
Total Number of Additional Teachers (in thousands) Required (1965-75)

Assumption about Enrolment	Total No. of additional teachers (in thousands) during 1965-75 on the basis of pupil-teacher ratio of				Annual requirement of additional teachers (in thousands) during 1965-75 in the basis of pupil-teacher ratio of				Enrolment needed in training institutions on the assumption of pupil-teacher ratio of			
	35	40	45	50	35	40	45	50	35	40	45	50
I. 100 per cent in age group 6-11 and 50 per cent in age group 11-14	2,007	1,611	1,306	1,061	201	161	131	106	447	358	291	236
II. 100 per cent in age group 5-11 and 75 per cent in age group 11-14	2,322	1,886	1,550	1,281	232	189	155	128	516	420	344	284
III. 100 per cent in age group 6-11 and 100 per cent in age group 11-15	2,637	2,161	1,794	1,501	264	216	179	150	587	480	398	333

facilities are not in proportion to the requirements, it is difficult to adopt a uniform policy at the national level for clearing the back-log. Each State has to have its own strategy for clearing the backlog and to maintain balance between the demand and supply of trained teachers within their jurisdiction. The statement as given in Appendix 3 will indicate the position of trained and untrained teachers at the elementary level in this country.

It is apparent from the table (in question) that incidence of untrained teachers is quite significant in the states of West Bengal, Assam, Orissa, Mysore and Gujarat. The total number of untrained teachers comes to around 4 lakhs. In addition to making arrangements for the training of additional teachers required for meeting the expansion of elementary education, suitable steps need to be taken to clear this back-log of untrained teachers.

As regards the number of teachers that we would need in the next ten years, it would appear that the country would need a minimum of 3 to 4 lakhs of teachers annually. The following table has been prepared on the assumption that the pupil-teacher ratio in elementary schools would range between 35 : 1 to 50 : 1 and there will be different targets of enrolment.

It will be evident from the above table that the requirements of additional teachers during the period 1965-75 would vary from 236 to 587 thousand according to the size of the class and the targets of enrolment to be reached. Obviously, therefore, about 4 lakhs of teachers would have to be trained every year. This would imply that the existing training facilities for elementary teachers would have to be almost doubled—a challenging task indeed which can be fulfilled through proper planning and efficient implementation with courage and conviction. The expansion of training facilities for elementary teachers will have to be done in two ways. Firstly, the intake capacity of the existing training institution will have to be increased and secondly, new training institutions will have to be opened.

The first alternative would require us to define the optimum size of the training institution. Currently, opinion is in favour of large size training institutions for improving the quality of teacher education and meeting the challenge of numbers to be trained. While recommending large size institutions, it is assumed that the per capita cost is lowered and that efficiency will be increased as better facilities can be provided to the larger establishments. Exponents of smaller units claim that better inter-personal relationships, effective practical work and group teaching techniques can be better organised in smaller units. Smaller units had relevance particularly in the beginning years as there was not much demand for trained teachers. They are still continuing as a legacy of the past. Some of them are too small to be economically sound and educationally justifiable. Therefore, there is a need to find out an optimum size of training institution so that quality may be commensurate with the cost. This may be done through research.

Meanwhile the recommendation of the First National Seminar on teacher education endorsed by the Study Group on the Training of Elementary Teachers in India and the Syllabus Committee in this respect may be adopted. They recommended the size of training institutions between 160-200 for a two year course. While deciding about the size of a training institution, the scope of effective organisation of in-campus and off-campus practice-teaching in the neighbouring schools, especially in rural areas, where even adequate transport facilities are not available, should be kept in view.

Here are a few more suggestions to meet the challenge of training a huge army of elementary teachers :

1. It is necessary that each state prepares a projected master plan of teacher training for the next decade taking into consideration the additional manpower required during this period in terms of the growth of population and backlog of untrained teachers that exists at present. The entire programme may be suitably phased out keeping in view the financial resources that will be available. What is very necessary is to take a perspective view of the total situation in the coming 10 years and to draw out a realistic plan. Every state should adopt a firm recruitment policy and it should be incumbent on any local authority to appoint trained teachers only as far as possible. Expansion of training facilities be so planned as to balance the demand and supply of trained teachers by 1971 in addition to clearing the backlog of untrained teachers.
2. The recommendations of the study group to clear the backlog are fully endorsed. The group recommended that :
 - (i) A substantial number of these untrained teachers would be above 35 years of age and would have put in a service of 10-15 years. Little useful purpose is likely to be served by sending them for a regular course of pre-service training. Their training should be undertaken through short term in-service course.
 - (ii) For teachers below the age of 35 who have put in 5 to 10 years of service, the pre-service training course should be of one year.
 - (iii) Full-term training courses would be required for those untrained teachers who have put in less than 5 years of service and are below 35 years of age. The number of additional training places would have to take account of these untrained teachers.¹
3. Correspondence courses are most suitable for the training of untrained teacher at (2) (i) and (ii) above, since they would

1. *Ibid.*, pp. 27-28.

not take teachers away from the schools for a long time. The correspondence courses, however, would be supplemented by short-term vacation courses for practical work. For this purpose residence in the training institutions during the summer vacations may be deemed as an essential requirement. The correspondence courses may be so designed that they enrich the academic and professional competencies at the same time and that they lead to the award of certificates in teacher training.

4. For the teachers in category (2) (i) above particularly, short term vacation courses and evening courses are very useful. In addition to catering to the needs of this category of teachers, these courses would also be used for providing in-service education to the elementary teachers with a view to orienting them to the new developments and modern practices in the field of elementary education.

The Problem of Wastage in Elementary Teacher Training. The First National Seminar on the Education of Primary Teachers in India reported that "about 25 per cent of the students enrolled either discontinued their studies during the course, or even if they completed the course they did not take the final examination. Similarly, the pass percentage in terms of number appeared is little over 80 which also is rather low".¹ Besides this, there are trained teachers who fail to secure jobs in schools. Sometimes, preference is shown by the local authorities (Panchayats or local bodies) to untrained teachers on extra-educational grounds. If this wastage is calculated in terms of money, the amount is colossal.

The wastage in elementary teacher training can be reduced to a considerable extent, if the following measures are adopted :

1. The trainees are carefully selected;
2. Sound instruction and effective counselling and guidance are organised in the training institutions;
3. Proper techniques of assessment and evaluation are adopted;
4. Financial assistance is provided to the trainees, so that they are not compelled to drop out before the completion of the course due to financial difficulties;
5. Good incentives are provided to the trained teachers in terms of salary scales, service conditions, further education, free accommodation particularly in difficult areas; and
6. Enactment of laws requiring the appointment of trained teachers only.

In-Service Growth of Teachers. Usually, there is no built-in and well defined system of certification of teachers after training. On successful completion of the training courses, they are usually

1. *Ibid.*, p. 61.

awarded certificates by the state Departments of Education, which are reckoned *ipso facto* as 'licences' for entering into the teaching profession and to remain in it without ever being required to renew the same. It is high time to take decision whether this practice should be allowed to continue or the teacher should be required to renew them from time to time, thereby encouraging the teachers to participate in in-service courses and to remain on a continuous process of growth and development. It is felt that a stage has come when our teachers can be required to renew their certificates every ten years of their active service.

In order to facilitate participation of teachers in in-service courses of various kinds, it will be necessary to have extension centres in every elementary teacher training institution with additional staff and facilities. In addition, it can be a regular function of the inspectorate to offer in-service courses to the teachers. This would require that the inspectorate should be sufficiently strengthened and kept up-to-date so as to enable it to organise in-service courses. It is suggested that the teachers will be allowed to cross their efficiency bar in the time scale or promoted to a selection grade only after they have participated in some form or other in the in-service courses.

Financing Elementary Teacher Training. It is obvious that we have to expand the training facilities in order to cope with the increased enrolment in the elementary schools. This can be done by studying the scope of expansion of each training institution that exists today and developing all of them to the fullest and also by establishing new training institutions. While expanding the training facilities and maintaining quality at the same time, it may be necessary to close down inefficient and poorly equipped small units or to consolidate them into larger units by amalgamation. Evidently, a huge amount of financial resources would be needed for this programme. If quality and quantity have to go together, and if we believe that properly trained teacher is the pre-requisite for any educational improvement, we need to find out this money anyhow. In this connection, the following recommendations of the Syllabus Committee are worth mentioning.

Considering the vital importance of teacher education and since it is professional education, it is recommended that the Government of India should assume greater responsibility for teacher education. So far as finances are concerned, it should :

- (i) bear all non-recurring expenditure on the development of existing institutions and establishment of new institutions ;
- (ii) cover the entire expenditure on stipends and salaries of trainees ; and
- (iii) award suitable block grants for the improvement of library, laboratory, furniture and equipment.

On the other hand, the State Government should meet the entire expenditure on the instructional and administrative staff. It should further spend definite sums of money per year on items like "equipment, laboratory, library, furniture and other allied items."¹

To it we would like to add that community support should be enlisted and maximally utilised for these improvement programmes. It may be mentioned here in this connection that the capital expenditure on building should be reduced to the minimum and adequate money should be spent on salaries of the staff, financial assistance to the students, physical facilities and supply of equipment, extension work and supervision of training colleges,—items which should receive high priority in financing teacher training. It has to be emphasised that the provision of facilities alone will not improve the situation. The success of the training will depend upon the human material that is available, on the teacher educators themselves and the proper utilisation of the resources that are provided to the training institutions.

Status of Training Institutions. There is an all out effort in advanced countries to give teacher training a professional status, as is enjoyed by courses in engineering and medicine. The most essential criterion to achieve this purpose would be to design our training institutions in such a manner that they produce fully educated persons with adequate professional competencies to handle the human material with a view to giving proper shape to their personalities. To accomplish this object we have to offer longer courses and organise high level academic work in our training institutions.

To realise the objective of raising the status of teacher training institutions, it is considered very necessary to associate the universities in some way or the other with teacher preparation at the elementary level. This can be done by adopting one or more of the following measures :

1. By giving to the universities full academic control over elementary teacher education ;
2. By organising Area Training Organisations under the leadership of the universities on the British lines ;
3. By starting comprehensive colleges of education and thus bringing elementary and secondary teacher training under the control and supervision of the same principal.
4. By organising institutes of education under the direct control of universities offering training courses of various types at the pre-primary, elementary and secondary levels.

Probably, time has not yet come to bring all the elementary teacher training institutions within the fold of the universities. The universities may not, at this stage, be willing to take over full responsibility of teacher preparation at the elementary level because of the

1. *Ibid.*, p. 168.

huge number of teachers involved therein. But a humble beginning can be made in this direction by starting Area Training Organisations under the leadership of the universities. The establishment of Area Training Organisations was recommended by the International Team on Teachers and Curricula in Secondary Schools, 1954¹ and was subsequently examined by the Study Group² and Co O P Team.³ It appears that the opinion is in favour of withdrawing the academic control of elementary teacher training from the State Departments of education and handing it over to autonomous bodies consisting of the representative members of the universities, State Departments of Education, training colleges and schools of all type while the administrative and financial control may be allowed to remain with the State Departments of Education.

Now that the number of universities has increased in every state, it may not be difficult to organise A.T.O.'s within the geographical jurisdiction of the universities at least on a selective basis. If a State Council of Teacher Education representing all the appropriate interests is also established, which would be primarily concerned with the coordination of the various agencies of teacher education in the state including the State Department of Education and maintenance of standards of teacher education, it may be possible to decentralise the academic control and hand it over to different A.T.O.'s.

The idea of establishing comprehensive colleges providing training to the teachers at all stages, viz., pre-primary, primary, middle and the secondary on the same campus under the leadership of the same principal is worth experimenting. A beginning has already been made in some States. This seems advantageous in several ways. Firstly, it would be economical, since the same facilities of libraries, psychology and science laboratories, assembly halls etc. can be utilised by a large number of students. This is very desirable in a developing country like ours having limited resources for education. Secondly, association of all types of teachers—elementary and secondary, teachers of science and humanities, of arts and crafts, etc.—would go a long way towards enriching the academic atmosphere and towards promoting inter-group and professional understanding. Thirdly, an interdisciplinary approach to teacher education may be adopted with considerable advantage. Fourthly, the clustering of all types of institutions on the same campus would lead to better understanding of the problems of education at various stages. Lastly, this will develop several points of contact—social, cultural and academic—for the benefit of trainees at different levels.

These comprehensive colleges may take the additional responsibility of offering a four-year degree course in education with specialisation in elementary education. The first two years may consist of

1 *Teachers and Curricula in Secondary Schools*: Report of a Study by an International Team. 1954, Ford Foundation, New Delhi.

2. *Ibid.*, pp. 40-41.

3. *Ibid.*, pp. 79-82.

both academic and professional subjects. After the successful completion of the first two years, the students may be absorbed in the teaching profession. The rest of the course may be covered through correspondence-cum-summer courses, which will ultimately lead to the award of the degree.

For raising the status and quality of elementary teacher training, as a matter of fact all teacher training, we may also consider the establishment of Institutes of Education in some universities, particularly in the residential ones. The proposal is to convert the University Department of Education into Institutes which will offer courses at various levels in addition to doing post-graduate work and research. This will provide opportunities to the undergraduates to lead an enriched cultural life in addition to receiving professional training of high quality from the university men. Obviously, it is not intended to universalise all teacher training at the elementary level by locating it in the University Departments or Institutes of Education. Some institutes may be established on an experimental basis only.

Image of the Training Institution of the Future. By way of summarization an image of an elementary teacher training institute, so far as its organisation is concerned, is presented below :

1. All training institutions will be so organised with staff, equipment and other facilities, that their alumni can impart Basic education, which is the accepted pattern at the elementary stage.
2. The training institutions will be proportionately and evenly distributed over urban and rural areas, a geographical district being the unit of planning. The course and its organisation will be flexible enough so as to allow mobility of teachers from urban to rural areas and vice-versa.
3. All the training institutions will invariably be residential in character and the staff and students will live a corporate campus life.
4. The course of training will be of two years' duration and the intake capacity of each training institution will preferably be between 160-200. Small training institutions may either be closed down or be consolidated into larger units.
5. None having the minimum qualification of a pass in school leaving examination will be admitted to the course of pre-service training. In order to improve the quality of elementary education, it is considered desirable to appoint graduate teachers for teaching in the upper grades of elementary schools. Separate training courses will be offered to graduates for specialisation in the elementary field. Courses for both the graduates and undergraduates may be organised in the same institution, as is done in the Union Territory of Tripura. Alternatively, secondary training colleges may take up this additional responsibility of preparing graduate teachers for elementary schools.

6. All training institutions will be equipped with adequate number of qualified graduate teachers having special training in elementary education. Instructors of practical subjects like crafts, art, etc. will also receive professional training. They must have undergone an orientation course in teacher education. The teacher-pupil ratio in elementary teacher training institutions will range from 1 : 10 to 1 : 15. The load of work of teacher educators will be so determined that the staff gets sufficient time for supervision of practical work, for giving individual attention to trainees, for experimentation and self-study besides doing the teaching job and participating in community life.
7. The salary scales of teacher educators will be comparable to those of the intermediate colleges and the salary and status of teachers of practical subjects will be the same as those of other lecturers.
8. Trainees will not be required to pay tuition fees. Each trainee will be given a good stipend in addition to deputation salary in case of deputed teachers. The rate of stipend will be revised every five years. Trainees may also receive other assistance like use of free text-books from the library, grants for tours and excursions, etc.
9. At least 5 per cent of the total direct expenditure on elementary education will be spent on teacher education, the minimum of per capita expenditure being Rs. 1,200 considering the current-price level. While financing training institutions, it may be possible to enlist public co-operation and receiving land and contribution for buildings. The buildings will be inexpensive yet functionally useful and the rooms will be put to multipurpose use. The institution will have an organic relationship with the community around particularly with the schools that the community has set up.
10. Extension will be a normal function of each training institution. Inspectorate and training institutions through their extension programmes will offer periodic courses to the teachers in-service.
11. Each training institution will have an experimental elementary school on the campus besides having sufficient number of practising schools in the neighbourhood. To facilitate child study, there will also be a pre-primary school either on the campus or near it.
12. In course of time, the leadership of universities will be availed of in raising the standard and status of elementary teacher training and with this intention in view, Area Training Organisation within the geographical jurisdiction of the universities, or comprehensive colleges or institutes of

education in the university departments will be established on an experimental basis. State Council of Teacher Education will be set up in each state with specific functions having the ultimate objective of improving teacher training at the elementary level.

While concluding, it may be stated :

The preparation of teachers should be one of the most highly valued activities on any university or college campus; and institution not willing to attach such value to this function should disqualify themselves from participation in it. The evidence of valuing should be reflected in staffing policies, in salaries and in the willingness of many members of the faculties from all departments to invest their time and thought in the improvement of teaching.¹

1. F.S. Chase : *Education Faces New Demand*, University of Pittsburgh Press, 1956, p. 28

PRACTICABILITY AS THE KEY PRINCIPLE

The question of the curriculum and programme of teacher education has been for quite a time under the active consideration of all those who are interested in the improvement of school education in this country. In recent years a number of committees and groups have studied the problem in detail and made useful suggestions and recommendations for devising a better programme of teacher education at different levels. Some of the reports of such bodies have been of considerable help in formulating our own views on the subject. In doing so, however, we have been actuated by a sense of realism. We have made only such recommendations, as can be implemented in view of the realities of the situation obtaining in our country.

THE PRESENT SITUATION

The curriculum and programme of teacher education must be determined by a number of factors, such as, the resources—human and material—available for the purpose, the duration of the course, nature of motivation, etc.

Staff of training institutions. Teacher educators in the elementary teacher training institutions are generally trained graduates; and their training is the same as that of the secondary school teacher.

Equipment of teacher training institutions. The institutions meant for the preparation of teachers are generally ill-equipped in terms of library and laboratory facilities, space, practice teaching arrangements, teaching arrangements and teaching aids. What is worse, there is very little suitable educational literature available for the trainees. Books, prescribed and recommended for study, leave much to be desired. They are generally out-dated and deal with material which is not of much relevance to the conditions obtaining in our country.

Duration of training. In quite a few States, the duration of training for matriculates is still one year. But this training is generally regarded inadequate for a teacher who has to teach in the elementary school. On principle it is accepted throughout the country that the period of training should be not less than two years.

Motivation of student-teachers. The dominant motivation of the entrants in teacher training institutions seems to be passing the public examination administered at the end of the course and getting the diploma as a passport for employment. No wonder then, that the curriculum puts a premium on memorisation of certain facts given in the books or class lectures and at best on learning a few tricks of the trade. It is, therefore, too much to expect that a teacher prepared under these conditions would be able to discharge his duties efficiently in the school.

PROSPECTIVE DEVELOPMENT

Looking at the deficiencies in the programme of teacher preparation, a number of admirable recommendations have been made by various bodies in the past. But very little has so far been done to implement these recommendations. One of the reasons for this state of affairs seems to be that some of the recommendations though very useful in themselves are unrealistic in our present situation.

Preparation of teacher educators. We have, therefore, to take the present situation as the starting point and try to effect the realizable improvements in the programme of teacher education. One of the important considerations in the matter is obviously the academic and professional background of the teacher-educator. It might be possible to a certain extent to provide elementary teacher training institutions with teacher educators who have specialised in teacher education at the elementary level and who hold a Master's degree in the field. But for a considerable time to come, we will have to be content with the ordinary trained graduates as teacher educators at this stage. Most of our secondary teacher training institutions are confined to the programme of secondary education. It may be neither possible nor perhaps desirable to provide for specialisation in elementary education in such institutions. It is, therefore, necessary that those who are employed as teacher educators in the elementary training institutions should be provided on a part-time basis with such opportunities as may equip them with understanding and skills needed for the job. The State Institutes of Education and some selected Teachers' Colleges and Departments of Education in certain universities may undertake to organise such courses.

Material conditions of teacher-training institutions. It should not be difficult to equip teacher training institutions with adequate libraries and laboratories, because they are few as compared to the number of schools to which they cater and an investment in this programme would pay greater dividends in terms of improvement in school education. It is, however, essential to undertake the preparation of suitable books both for trainees and teacher educators on a priority basis. It is gratifying that the National Council of Educational Research and Training has already taken preliminary steps in this direction.

Re-orientation of motivation. The question of proper motivation is rather difficult to tackle. It should, however, be possible to bring

literary criticism, main trends in literature, a few selected representative poems and prose writings, children's literature, etc.

- (2) *Mathematics for citizens* : presentation of mathematics as a way of thinking and as an instrument of problem solving ; deductive and inductive methods of mathematics ; a short survey of mathematics in the context of the history of civilization.
- (3) *We and our human relations* : story of man since ancient to modern times, his institutions, his technology, his communication system—in short, his present civilization with particular reference to Indian history and culture.
- (4) *Science and modern world* : a historical perspective of science, science and modern living, etc.
- (5) *Art and art appreciation*: means of expression, comparative study of art forms, art in the community and home, art in the dress, architectural art, art of sculpture, graphic art, music and dance, etc.

Practice Teaching. Practice teaching has to be planned on the principle that education is essentially a process of growth and development of children and that this process consists in effective interaction between children and carefully selected activities conducted in their social and natural setting. To help student teachers to grasp this principle, a graded programme has to be worked out.

The first thing to do is to allow student teachers to observe teaching in practising schools and the demonstration school, if any. While conducting the theory courses it will be a good practice to observe actual teaching work and then to work out ways in which a particular idea (discussed in theory courses) can help in improving instruction or school programme or revising school curriculum, as the case may be. The next step could be to provide student teachers with the opportunities to familiarise themselves with children, classroom and school environment so that they have a 'feel' of the situation. Perhaps a training in teaching skills like using of devices, aids or conducting of a class to achieve a specific objective of curriculum, can also be taken up by making student teachers to teach a few lessons to the lower grades and a few to the higher grades of the elementary school with specific objectives and aids planned for use in the class. Then the third step would be to organise group discussions and conferences between student teachers, lecturers of the teachers training institution and teachers of the practising schools to plan an activity curriculum before the first year of the two-year course is out. Classes or particular areas of the school curriculum can also be assigned to the student teachers so that they may work upon them or prepare themselves for the job during the vacations.

Student teachers during the final stage of their block practice should not only develop skills of classroom teaching and guiding

individual pupils but also learn the use of evaluation procedures including diagnostic tests for remedial work, preparation of teaching aids and assignments and checking of home work, maintenance of cumulative record, and organisation of co-curricular activities. In short, they should be provided with all experiences which are essential for carrying out the teacher's varied responsibilities in the school.

Perhaps the most important and crucial aspects of the programme are the relationships between lecturers, school teachers and student teachers, and the attitude they have towards the whole programme. Co-operation, sympathy and understanding between lecturers and teachers of the practising school can go a long way to make the programme successful and to let the student teachers develop proper teaching behaviour. Perhaps it has to be kept in mind that development of a proper teaching behaviour comes about through a gradual and slow process of action and interaction within the situations and problems of teaching. Only when student teachers develop an activity curriculum in co-operation with and under the guidance of lecturers and school teachers, and then conduct each item of the curriculum with clearly conceived purposes under the sympathetic supervision of lecturers and school teachers that they will have opportunities of developing new ways, habits, understanding and attitudes for teaching.

Crafts. The general principle for the selection of a craft is that apart from its being rich in educational possibilities, it should have roots in the social-cultural milieu around the school. Student teachers should not only acquire sufficient standard of competence in the craft but also work out its educational potentialities, *i.e.*, how quantitative (mathematics), inorganic and organic (science), human (social studies) and aesthetic and emotional (art and language) relationships are involved in carrying out a craft successfully.

There seems to be differences of opinion as to how many crafts a pupil-teacher should learn. A general consensus seems to be in favour of one major craft in which a student teacher should specialise and other as a subsidiary craft in which he should develop a minimum standard of competence and generally familiarise himself with all its processes.

Community Living. Development of a sense of responsibility, leadership, co-operative living, a respect for discipline and traditions of an institution and promotion of healthful living are a few major objectives of community living programme. It is expected that the community living programme based on these objectives will help in developing qualities essential for democratic living and intelligent citizenship. But it is suspected that sometimes the programme is conducted under such conditions that the very purpose is defeated. This is forced upon student teachers who naturally do not take to them in the right spirit; and they have no hand in planning the programme. It is only when we view community living as a group activity which involves initiative, planned self-directed effort and

which is led by a group member that we may ensure democratic participation and citizenship training. Perhaps this is an ideal view which organisers of the community living programme should have. But, even if they have to make compromises because of limitations imposed by certain working conditions, they must see to it that every possible thing must be done to make the programme acceptable to the participants.

The major activities of community living programme will centre around :

1. Hostel life (*e.g.*, cleanliness and sanitation, personal cleanliness and grooming, table manners, inter-personal conduct, responsibility and care of collective property, participation in social and cultural activities, etc.).
2. Campus life (*e.g.*, cleanliness and sanitation, beautification of campus, care of property, etc.).
3. Participation in social and cultural activities (*e.g.*, Students' Council, Houses and Clubs, etc.).
4. Participation in sports and games.
5. Participation in educational tours.

Method of work. In order to execute the programme of teacher education in a planned and systematic manner, each teacher training institution must work out the details of the total plan of work through its staff council. This blueprint of work should be as much specific and well-defined as possible, although necessary changes and adjustments could be made later in the light of emerging situations. It is only then that an individual teacher educator will know how he will adjust his own scheme of work to the general plan, what objectives are to be achieved in respect of each part of the programme, what topics are to be covered and by which method, and so on.

Class lectures should be reinforced by discussion, written assignments and directed self-study on topics discussed in regular lectures particularly with reference to the problems of practice teaching and practical work.

Tutorial work should be organised so as to encourage active participation of student teachers in discussions on matters of topical interest. For this purpose the class may be divided into groups of eight to ten student teachers each.

Each group may be assigned some selected key topic for study and be asked to present it before the whole class, elaborate points, initiate discussion and answer questions. A lecturer of the institution may be entrusted with the guidance of each group. It is also necessary to organise seminars and symposia occasionally for discussing current educational problems.

Adequate emphasis should be laid on demonstration lessons. These may be given by experienced and good teachers of the practising

schools or the demonstration school. In case, the method lecturers are actually associated with the work of the demonstration school, they may also teach a unit of lessons to demonstrate the methods and techniques of teaching discussed by them in the class. A demonstration lesson must be followed by discussion in which all the student teachers who have observed the lessons, the school teacher and the method lecturer concerned should participate.

Practical craft work and community activities are to be undertaken in accordance with a carefully drawn-out plan and executed with seriousness of purpose. The costing procedure, quality of the products, record of work, sale proceeds—all these should be carefully attended to.

Evaluation. Motivation for learning depends a good deal on how the outcome of learning is assessed. The teacher education programme indicated above seeks to develop a variety of competencies and interests which are deemed to be basic to an effective performance of the teacher's job. It is, therefore, necessary to devise suitable techniques to evaluate the student teacher's achievement in the various aspects of the curriculum. What is even more important is that the evaluation procedure should become a part of the education process and serve to motivate the student teacher continually to make greater effort at learning.

In respect of the sessional work, the staff council of the teacher training institution may plan the total programme of evaluation in detail as to what it should comprise, how and when its different items should be administered, and in what manner its result should be used.

Evaluation of the sessional work in relation to the theory part of the curriculum may include written assignments on given topics, periodical tests, tutorials, etc. It is suggested that the sessional work in the courses on General Education assessed internally should form the sole criterion of success. No external examination may be required in the subjects of this area. In the case of the professional subjects, it may, however, be considered necessary for some time to administer also an external examination in order to ensure uniformity of standards. But even in this part of the curriculum, the sessional work may be given the same weightage as to the external examination. The reliability of internal assessment, which for reasons is sometimes suspected to be low, may be increased by adopting some suitable procedure. For instance, one committee for each subject may be constituted to standardize the marks awarded by the individual teacher in his subject. The members of such a committee may be the teacher concerned with the subject, one more member of the staff familiar with the subject and the principal who should act as co-ordinator. The sessional work of the student teachers in a subject may be rechecked by the committee on the basis of random sampling, and be moderated in the marks be effected, if needed. Adoption of a procedure like this is expected to minimize disparities in the marks

awarded by individual teachers and thus increase reliability of internal assessment.

The nature of practice teaching and practical work demands that there should be continuous evaluation of the skill and the performance the student teacher displays from day to day. It is suggested that appropriate schedules detailing important aspects of teaching be evolved. Supervisors and guides of the student teacher may assess the quality of his performance on the basis of those schedules. The final grade for each student teacher in this area may be determined in a conference of all the supervisors and guides. There does not seem to be any convincing rationale for external examination in practice teaching.

So far as crafts and other activities relating to community living are concerned, these should be evaluated solely internally. Obviously an external examination in crafts will not be meaningful, and the nature of community living programme precludes the possibility of its being assessed externally. But even in these areas, it is necessary to safeguard, as far as possible, against the factor of subjectivity involved in evaluation. The reliability of evaluation can be increased here also by adopting procedures similar to those suggested earlier in relation to the theory and practice teaching programme.

4 THE TRAINING COURSE FOR MIDDLE-PASS CANDIDATES

D. V. Chickermane

NEED FOR MIDDLE-PASS CANDIDATES FOR TEACHERS' POSTS :

At present the policy is to recruit S.S.C. (matriculates) pass candidates for teachers' posts. This policy is necessary for ensuring a high standard among the teachers. But in many States it is not possible to get enough number of S.S.C. pass students for teachers' jobs. Many S.S.C. pass students go in for college education and others seek employment in firms, offices and similar establishments. Those, who join the teaching profession, give up their jobs when they get better jobs elsewhere. In view of this situation, there is still a need for recruiting middle-pass candidates for teachers' jobs.

This need is felt particularly in backward rural areas and tribal areas. The villages are small and amenities of life are poor. Hence S.S.C. pass teachers do not agree to go to these places. The natives of these villages have an attraction for their own villages and they stick on to their jobs, even though they are less qualified than S.S.C. pass candidates. There would be fewer staff changes and the small schools would develop properly when manned by local teachers. Hence there is a great scope for middle-pass teachers in this field.

Another field where the need for middle pass teachers will continue to be felt for a long time, is the field of women's education. One serious handicap in the progress of girls' education is the lack of women teachers. Owing to backwardness of women's education in rural areas, paucity of S.S.C. pass women teachers is gradually felt. Under these circumstances, it will be necessary to recruit a larger number of middle pass women teachers.

I have mentioned above the two fields where the need of middle-pass candidates will continue for a long time. But even in big villages and urban areas, there will be need for middle-pass candidates. At the present moment, we cannot get a sufficient number of matriculate candidates for teachers' posts. The introduction of compulsory education has resulted in a wide expansion of schools. Hence to overcome the shortage of teachers, middle-pass candidates will have to be recruited almost in every State. Once such teachers are recruited, it will be necessary to draw up a scheme of training for these teachers.

OBJECTIVES OF TRAINING MIDDLE-PASS CANDIDATES

The objectives of training middle-pass candidates will not be different from those of matriculates. The middle-pass teachers have to work in the same type schools as the S.S.C. pass teachers have to. The only difference in training would be to devise ways and means to overcome the lower academic standard of middle-pass candidates. It may be noted that middle-pass candidates have undergone a general school education of seven to eight years' duration. The matriculates, on the other hand, have undergone schooling for a period of ten to eleven years. Thus there is a deficiency of three years' duration in the education of the middle-pass candidates, as compared with the matriculates. Any training programme for the middle-pass will have to take into account this gap of subject matter and provide for it.

This will lead on to the question of the duration of training of middle-pass candidates. Should the duration of the course for middle-pass candidates be the same as that of the matriculates? Some argue that the duration of both the training courses, for matriculates as well as middle-pass candidates, should be the same. The duration generally accepted for matriculates is now two years, though in some States it is only one year. On this basis the duration of training for the middle-pass candidates should be over two years. Obviously the academic standard of middle-pass candidates will be lower than that of matriculates. If the duration of training is kept the same for both kinds of teachers, we shall be creating two categories of teachers in primary schools, one of matriculates and the other of middle-pass candidates. Such a situation will lead to many administrative difficulties and discontent and dissatisfaction among middle-pass teachers. The view, therefore, generally accepted favours provision of a longer duration for training middle-pass candidates, so that when the middle-pass candidates complete their training, they will be almost on par with the matriculates. This would mean that the saving in years in school education made by the middle-pass candidates would be utilised for professional training. The middle-pass teachers ordinarily save three years in their school education period. They can easily spend a few years more than matriculates in their training programme so as to be on par with them.

What should be the duration of training for middle-pass candidates? Many educationists have suggested that the training for middle-pass candidates should be of three years' duration instead of two years' duration as at present. Some would put down even at four years. From two years to four years would be too big a jump. Hence in the first instance, a jump of one year appears reasonable. The duration of training for middle-pass teachers needs to be increased from two years to three years. The entire period can be utilised for strengthening the academic background of middle-pass candidates.

I have referred to the duration of the course here because it is intimately connected with the fixing of the objectives of training. A

shorter duration would lead to the lowering of standard. If the course is lengthened, it would be possible to bring the middle-pass candidates on par with the matriculates by providing additional coaching in academic subjects. The main objectives of providing a training course for candidates for teachers' posts can be summarised as under:

1. Adequate mastery over the subject matter for teaching the prescribed syllabus in primary schools ;
2. Mastery over the techniques of teaching ;
3. An intelligent understanding of the psychological and sociological background of the educational system ; and
4. Skills in craft-work to be taught in primary schools. The course indicated by me in this chapter will be mainly based on these objectives.

What are the points on which a greater emphasis should be laid in the syllabus of middle-pass candidates? The first point will be the academic content. The academic standard of middle-pass candidates is lower than that of matriculates. Hence the professional course should provide them with a greater quantum of academic education, so as to bridge the gap of knowledge between the middle-pass and matriculates on the termination of training. The transition provided in the course should be gradual.

Another point which needs to be emphasised in the syllabus of middle-pass candidates is the science instruction programme. This is our national need today. Our educational machinery is to be geared on to efficient science instruction and the primary teachers, who form the bedrock of the educational system, will have to be trained as efficient science teachers. Thus the training programme of these teachers should include instruction in general sciences and their application to life situations so as to inculcate a broad outlook and an intelligent understanding of scientific method and its principles among school children.

ACADEMIC SUBJECTS TO BE INCLUDED IN THE COURSE

I shall now give an outline of the courses that may be included in the training programme of middle pass candidates. It will not be possible, nor desirable, to have a uniform course all over the States in India, because conditions in States differ. Hence in this chapter a few guidelines would be adequate and leave freedom to each State to devise its own course. I start here on the assumption that the duration of the course for middle-pass candidates will be three years, as earlier stated by me. The outline of the course will take this duration as the basis. But in any State where the duration for middle-pass candidates is longer or shorter, it should not be difficult to adjust the outlines accordingly, expanding or compressing the matter in the light of the duration of the course.

The course will be broadly divided under four heads, viz., (i) academic subjects, (ii) teaching techniques, (iii) craft and (iv) com-

munity living and co-curricular programmes. This division, it should be clearly understood, is made only for convenience of treatment and should not lead one to presume that the heads are independent and unrelated to each other. It should not be overlooked that the entire course forms one integrated unit, as a whole, and there will be many points of contact between the different aspects of the curriculum.

In the academic field, our aim will be to bring the middle pass candidates on par with matriculates in their subject-matter content. I have stated earlier that these middle-pass teachers are, on an average, three years behind the matriculates. Hence during the three years' period of professional training, they will gradually do the three years' academic work which the matriculates have done in secondary schools. In respect of language, mathematics, general science and social studies, the syllabus of middle-pass candidates would, more or less, correspond to the academic syllabuses of grades IX, X and XI of secondary schools. Of course, the same will not be reproduced, in toto, but will be adapted to suit the changed circumstances.

In language, the middle-pass teachers will have to cover much ground. The middle-pass teachers do not have adequate mastery over the regional language which they have to teach in schools. They will have to make up their deficiency in the course of professional training. The middle pass candidates should be introduced to modern literature in the language through selections from standard authors. Side by side, the candidates will have to acquire mastery over grammar, composition and figures of speech, with a view to writing good composition and appreciating beautiful poetic pieces. The language course will consist of text-books prescribed for detailed study as well as books for supplementary reading and comprehension. The standard of books prescribed will be that of matriculation.

An important part of the academic curriculum of the middle-passed candidates would be general science. I have earlier pointed out that a sound grounding in science will have to be an immediate necessity. What should be the content of the course in science for middle-pass candidates? Such a course should aim at developing an intelligent understanding of application of science in our daily life. It should aim at inculcating the principles of the scientific method among the learners. The essentials of the scientific methods are: observation, generalisation, verification and experimentation. As such, the middle-pass candidates should have many opportunities to apply the scientific method to biological and physical sciences. Among biological sciences would come nature study, physiology and health, and hygiene. Many of the middle-pass candidates will have to work in small rural areas, where there is an absence of healthy conditions of life, such as lack of sanitation, drainage, and accumulation of filth on road sides. These teachers will have their share in educating not only their own pupils in health and hygiene, but also the parents and guardians of pupils. Thus

these middle-pass teachers will have to contribute to the improvement of the health of the village.

The role of the village teacher as a village leader is an important one and cannot be overlooked in any scheme of training. When the teacher is being prepared for teaching in schools, he is also being prepared for developing his village through his knowledge, skills and experience. Hence a good grounding in agricultural science will be an asset to a village school teacher. The course should consist of ideas of fertilizers, types of soil, insecticides, and cropping operations. Science touches life at innumerable points. It has become a part of the daily life of the citizen at home, in his profession, in his recreation, travel and health. As such, modern developments of science should form part of the science course of middle-pass candidates. Students should know something of the revolution that science has brought about in modern travel, communications, food production and health.

Observation and experimentation form the basis of scientific experimentation. Middle-pass candidates, during their period of training, should be required to go out and observe the working of mills, factories, generating stations, and large and small industrial concerns. This will give the teachers a rich and varied experience of the developments of science in the modern world. These teachers should be required to handle laboratory equipment and be trained to perform experiments in science. A list of experiments in nature study, elementary physics and chemistry may be drawn to acquaint these teachers with laboratory work. Such a course will include preparation and properties of gases, purification of water, lenses and their properties, advantages of simple machines, experiments of floatation, air pressure, etc.

In mathematics, arithmetic will be the mainstay of the curriculum. Arithmetic as now taught through books is fossilised. We meet with problems of simple and compound interest, involving lengthy fractions, matters of bygone days. Arithmetic is part of life and should be taught as such. All arithmetic should be based on problems of life. Such problems will furnish abundant material for computations. Each social institution in life is building up its own arithmetic. We have the arithmetic of the post office, of the cooperative society, of travel, of taxes, and of business. Several of calculation methods have now been completely revolutionised and simplified by the use of ready-reckoner tables. Middle-pass candidates should be acquainted with these new methods and the use of ready-reckoner tables in calculation of interest and other similar computations.

Among other branches of mathematics, some algebra and geometry will also find place in the syllabus of middle-pass candidates. Algebra will come in as a helpful method of solving arithmetical problems and will arise out of it. Students will do exercises in formula substitution, simple equations and problems based on them. Some knowledge of directed numbers, and uses of formula in quick calculations will prove a useful study. Graphs should find a very

important place in the curriculum of mathematics. Students should know how data can be pictorially represented and interpreted. A number of school problems can be found for graphical representation. We can collect data about attendance, enrolment, craft production, examination results, daily weather and rainfall, etc., for graphical representation.

In the field of geometry, students will discover by experimental methods properties of angles, parallel lines and figures as triangles, parallelograms, rectangles and circles. Training in logical thinking can also be given by deducing some of the properties and then verifying them experimentally. Mensuration is an equally useful and interesting branch of mathematics. It has many applications in life, especially in land measurement and surveying. Mensuration should be taught in connection with practical situations, as finding carpet areas of rooms, areas of garden plots, capacities of drums and grain containers, etc.

The next subject which should be included in the training course of middle-pass candidates is social studies. This item will bring the teachers in close contact with the administration of the village, *taluka*, district, state and the country. At present there is available plenty of material, reported in newspapers, for correlation with the study of history, geography and civics. The middle-pass candidate should have a thorough grasp of the history, geography and administration pattern of our country. These subjects should not be taken in isolation, but treated as interdependent. Visual aids form a very powerful method of teaching these subjects. As such, maps, pictures, models, charts, graphs and audio-visual aids, such as films, filmstrips, slides, should be copiously used in the course of the study of this subject. The teachers should be trained to operate simple filmstrip projectors and use filmstrips in teaching geography. At present a large stock of filmstrips is available on geography and projectors, with or without the use of electricity are available at fairly moderate prices for use even in primary schools. The study of the subject should be supplemented by visits and excursions to places of historical and geographical importance in the neighbourhood and even to distant places, if funds permit. Provision of excursion grants is a useful item of expenditure in the budgets of training colleges for middle-pass teachers.

PEDAGOGIC COURSES

In addition to the academic courses so far outlined, professional training will have to be given to the middle-pass candidates. Such a training will lay greater emphasis on teaching methods, preparation of teaching aids and management of classes. There is at present a great deal of wastage and stagnation at the primary level of education. One of the prominent reasons for this state of affairs is the poor quality of teaching which leads to detention of children in the same grade longer than one year. How can such detention be avoided? The remedy for eliminating stagnation is the provision of better training for

teachers. Hence due emphasis should be laid on techniques of teaching. Good models should be placed before the middle-pass candidates who should be given intensive practice in teaching through guidance and supervision.

The present practice of stray lessons given in practising schools under artificial conditions does not lay a sound foundation for good teaching. No doubt, it initiates the teacher in some elementary skills of teaching. But these skills can become deep-rooted by continuous practice in village schools. Such type of continuous teaching is now known as 'internship'. It would be desirable to attach middle-pass candidates, during the period of their training, to rural schools for varying period for practice of continuous teaching. This item in the syllabus will acquaint the teachers not only with methods of teaching, but also with the acute problems of primary education as wastage, stagnation, etc. and train the middle-pass teachers in school managements. Since the training institutions for middle-pass candidates are located in rural areas, it should not be difficult for these institutions to find suitable schools in their neighbourhood for the internship programme. The duration of internship may be one month a year, or an aggregate period of three months in the whole course.

Preparation of teaching aids should be an integral part of teacher training for middle-pass as well as matriculate teachers. This is necessary in view of the meagre provision of teaching aids in rural primary schools. Many of these schools do not possess an adequate number of maps, charts, or diagrams. It should be possible for middle pass teachers to prepare suitable charts, maps, and other illustrative materials. This is a valuable part of teacher training and schools better equipped than as at present will substantially reduce stagnation.

This brings us to the question of the educational theory to be included in the training course of middle-pass teachers. As this is the first stage of teacher education, the syllabus should not be made top-heavy. Emphasis may be laid on the principles of activity in learning, principles governing behaviour of children in schools and outside and principles necessary to maintain good discipline in schools. Students should have a clear grasp of the syllabus in studies prescribed for primary schools in the State concerned and the principles underlying it and the targets aimed at.

One aspect of training which needs emphasis is the practice in handling plural classes, single teacher schools, and shift schools and other new types of schools which are being devised to meet the onrush of children in the compulsory education area. Middle-pass teachers will have actually to work in such schools in future and it is but necessary that they should be familiar with the type of work expected to be done in such schools. Some of the middle pass teachers may do their internship in these types of schools.

TRAINING IN CRAFTS

Craft work forms an essential part of the work done in modern

primary schools, whether basic or non-basic. Educationists have realised that craft-work in primary schools has great educational potentialities. Crafts help in developing the personality of the child by providing him with purposeful activities in which he has to use his hands and tools. They cater to his desire for creative work and provide necessary motivation for instruction in school subjects. They initiate the child in productive work and wipe out distinction between educated and uneducated. Teaching through activity has been accepted as the best method of teaching, and crafts form the basis of activities. In view of these considerations, crafts have been included in the syllabuses of primary schools. The three basic crafts which have figured prominently in basic education are: craft, agriculture and woodwork. Owing to many difficulties, these crafts have not been introduced in all schools. There is now a move to introduce simpler types of crafts as clay-work, paper-work, cardboard-work, bamboo-work, coir-work, mat-weaving, etc. in many schools to provide useful andwork to children.

Since the middle-pass teacher will have to teach crafts in primary schools, it is necessary to include craft-teaching in his training syllabus also. Such a syllabus should aim at two ends, *viz.*, the teacher should have a thorough skill in one or the more crafts introduced in the primary schools in the State, and the teacher should comprehend the educational background of craft work and should integrate it with education. A syllabus will have to be drafted keeping both these objectives in view. It should be desirable to train the teacher in more than one craft so that he can fit in any school in the State. The teacher should get adequate practice in the craft so that he can work it economically. He should also know the economic potentialities of the craft. Basic education lays stress on the economic potentialities of the crafts along with their educational utility. The training imparted in crafts should enable the teachers to set up craft workshops in their schools and demonstrate improved methods of crafts to villagers. Thus the school should provide guidance to village artisans and indirectly help village agriculture and rural crafts.

COMMUNITY LIVING

Another item which is generally included in the curriculum of middle-pass teachers is known as the Training in Health and Community Living. This subject includes a variety of co-curricular activities. Students are expected to reside in hostels and be self-sufficient to the extent possible. They form a cooperative community and run their hostels. They participate in the celebrations of national days, religious festivals, excursions, etc. as part of their training in community living. This programme is intended to develop healthy attitudes to work among teachers. A school is not merely a place where knowledge is given. It is also a social group. It is a community, and the teacher is the leader of the school group. As such, the teacher should have in him qualities of leadership, tolerance, perseverance, cooperation, etc., through a well-organised programme of community living.

Residence in hostels is a compulsory item in teacher training in many of the training colleges. This provides ample scope for training in community living. Modern training colleges for middle-pass teachers are all provided with hostel accommodation for all trainees.

EVALUATION

The programme of evaluating teacher training is an important part of training. Evaluation can be done in two ways. First, there will be a continuous evaluation of the work done in the college throughout the year. This will be done internally. The items for such continuous evaluation will include items like practice-teaching, craft work, as well as other non-examination subjects like physical education, art, music, etc. In a professional course, stress is laid more on practical work than theory. And as such, evaluation of year's work should have a major place in such courses. Usually it has been the practice to give internal assessment the same weight as the external examination. The staff members can devise a scheme of internal assessment suitable for their own institutions.

How can training in health and community living be assessed? The usual practice has been to allot marks. But community living is supposed to develop traits such as cooperation, devotion to duty, leadership, which cannot be assessed by marking. These traits can be evaluated by rating scales. The traits to be rated will have to be decided and then suitable rating scales devised. These rating scales will be applied to the trainees by the staff members of the institution and the trainees may, themselves, rate their colleagues. The rating scales may be prepared on a five-point scale or on the weighted rating scale pattern of the Thurstone type.

In addition to the items mentioned above for internal assessment, there will be such items in a training college, as physical education, craft work, music, singing, drawing, etc. Generally these are not treated as examination subjects, but as certificate subjects. A definite quota of work will be prescribed for these subjects and the trainees will be expected to complete the prescribed quota of work within their period of training. Trainees who complete the prescribed quota are given a certificate that they are eligible to appear for the external examination. For certificate subjects systematic records of work done by the trainees will have to be maintained and the certificate should not be a formal one, but represent the fulfilment of the obligations of practical work prescribed in the syllabus.

An external examination would continue to be the instrument of evaluation for theory subjects. However, the external examination can be made effective in two ways. First, it will include a larger proportion of short objective tests or short questions which will need paragraph answers, and second, it will be spread over the entire course so that a student can drop off some of the subjects as he proceeds with the three years' course. In the external examination, there should be a liberal provision for promotion to a higher class, subject to making up deficiencies, if any, in any subject of failure.

SPECIAL PROBLEMS

One of the special problems facing the organisers of the course for middle-pass candidates would be the starting of separate training institutions for these candidates. It would not be financially possible to run independent training institutions for middle-pass candidates. With the policy of recruiting matriculates in larger numbers, there would be less and less scope for middle-pass candidates' recruitment. As such it would be necessary to utilise the same training institution, meant for matriculates, for the middle-pass candidates also. There will be some points of contact between the training course for these two categories of teachers. These will be crafts, community living, practice teaching and the various certificate subjects, as drawing, music, singing, etc. Independent training institutions would mean duplication of work. Moreover, contact between matriculates and middle-pass candidates will have an indirect wholesome effect on the middle-passed candidates. Hence it would be desirable to run both the types of courses in the same type of institutions with suitable adjustments in time-tables and staffing.

Another problem concerned with the training course of middle-pass candidates is the lower academic standard of the middle-pass candidates. I have mentioned earlier that this standard is to be brought on par with the matriculates by the time the middle-pass candidates finish their training. This, we may say, is the weakness of this course. In spite of efforts to bridge the gap, some deficiency will remain among the middle-pass candidates. A kind of inferiority will be attached to this course. To overcome this attitude, it is necessary to provide opportunities to middle-pass teachers to pass the matriculation examination even after the completion of their training course. Facilities for coaching, books and permission to appear externally for the matriculation examination should be given to these teachers. The State may move the examining boards to give all the necessary facilities to teachers in service to study privately and improve their qualifications by obtaining higher academic qualifications. Arrangements may be made for correspondence courses for these teachers.

CONCLUSION

I have surveyed in this chapter the need for recruiting middle-pass candidates for teaching posts and also given an outline of the course of training to be provided for these candidates. The need for middle-pass candidates will continue in many States for several years to come. In some circumstances, there would be a greater advantage in recruiting middle-pass candidates than matriculates. A staff of middle-pass teachers is more steady and in general, more devoted to work than a staff of matriculates. This has been the experience of several administrators. The policy should, therefore, be to recruit good middle-pass candidates and given them such training as would bring them on par with matriculates. Hence States in their recruitment policies, should not discard middle-pass candidates, only on their ground of lower qualifications.

THE STATE INSTITUTES OF EDUCATION

C.S. Subba Rao

INTRODUCTION

The year 1963 is an eventful year in the history of teacher education in this country. It was in that year that the Union Ministry of Education decided to set up State Institutes of Education, one in every State. This proposal was discussed at a Conference of State Ministers of Education in May, 1963. All the State Governments accepted the proposal.

Almost all the States except Assam, Madras and Kerala established their institutions in 1964. Later, such institutions were established in these States also. An orientation programme for the principals and vice-principals of various State Institutes was organised in the Central Institute of Education, Delhi from 10th February to 26th March, 1964. This workshop drew a tentative programme for all the participating State Institutions for three years comprising the remaining two years of the Third Plan and the first year of the Fourth Plan.

ROLE AND FUNCTIONS

The main objective of a State Institute is to bring about a qualitative improvement of school education at different levels. Their main functions are :

1. Research ;
2. Training ;
3. Extension and Field Services ; and
4. Publications.

Every State Institute is further expected to play the role of a clearing house informing different agencies about the education activities of the entire State.

Research. An S.I.E. is expected to organise research in school education itself and further to seek collaboration with other agencies in that direction. The Delhi workshop recommended that an S.I.E. should :

1. Identify problems in the field through the inspecting officers, training institutions and extension service centres ; and
2. Devise or get devised adequate solutions to these problems and try them out in the field. The S.I.Es. may attempt research, either under their direct auspices, or get it done through other agencies in State or through the N.C.E.R.T. The S.I.Es can assist the collaborating organisations on the lines of the GARP scheme of the N.C.E.R.T.

An S.I.E. can also undertake the evaluation of the existing scheme of the Education Department. The scheme to be selected for this purpose should be decided in consultation with the State Education Department.

The Delhi Workshop further recommended that every S.I.E. should not initially undertake such projects, which show results after a long study in the beginning.

The concept and techniques of evaluation form a part of orientation and other courses conducted by S.I.Es. for teacher educators, elementary school teachers and supervisors. Evaluation is an important area in which a few studies have been taken up by a few of the S.I.Es.

Training. The training programme of an S.I.E. generally includes the following items of work :

1. Induction training courses to supervisors and teacher-educators ;
2. In-service training programmes to supervisors and teacher-educators, so organised that every officer gets such training for three months in a period of five years ;
3. To organise conferences and seminars for senior officers of the Education Department. It is obligatory to organise at least one such conference of one week's duration in a year ; and
4. To organise conferences or seminars for non-official office-bearers of local bodies connected with the administration of education.

Extension. One of the major roles of an S.I.E. is extension. It carries on this programme with the help of the Extension Service Centre which is attached to it. The various types of extension programmes are :

1. Giving guidance to the inspecting officers and elementary teacher educators by organising consultative services and experimental work in selected training institutions, besides organising short term in-service courses ;
2. Conducting the primary extension services centres attached to it. On an average fifty elementary schools are attached to a centre, which is sponsored by the Department of Basic

Education of the N.C.E.R.T. The extension wing of an S.I.E. should extend its activities to every nook and corner of the State through teacher training institutions.

Publications. An S.I.E. is further expected to produce an educational literature. It may include plans and programmes for teachers, text-books for children and pedagogical journals.

Miscellaneous items. An S.I.E. is further expected :

1. to evaluate the state educational programmes;
2. to assist in the revision and improvement of text-books;
3. to conduct experiments with a view to improving education;
4. to improve curricula and methods and devise improved teaching aids;
5. to educate public opinion in the state on the need, expansion and qualitative improvement of education; and
6. to assist the State Education Departments in the preparation and implementation of educational plans.

The Delhi Workshop also held that an S.I.E. can render useful assistance in the preparation and implementation of plans—both long-term and short-term. It recommended that an S.I.E. should : (1) work out the practical details of the schemes approved, (2) prepare the necessary material for use by inspecting officers, training institutions and teachers who are concerned with its implementation, and (3) watch over progress in the field and suggest amendment where necessary. An S.I.E. can advise its Directorate for the scheme or programmes that are likely to be implemented in future and prepare the necessary academic material sufficiently in advance. It may be noted that there is also hardly any machinery in the States at present for long term planning. An S.I.E. can be entrusted with this responsibility.

An S.I.E. also functions as the clearing house of information in its own State. It collects the basic data relating to education of the State and makes it available to all who need it. 'A' Basic Data Unit has been established in the majority of the S.I.Es as an integral part of the library. Every S.I.E. gets a copy of Form 'A' of educational statistics for each district within its own jurisdiction. It further sends copies of the information collected to all other S.I.Es in the country in Hindi or English. This enables every State to know what is happening in other States. It may be further noted that practically no State has any agency for public relations. An S.I.E. is expected to play this role.

An S.I.E. can play its role effectively, provided there is full collaboration with other agencies. The Delhi Workshop recommended that an S.I.E. should keep close contacts with N.C.E.R.T. on one hand and S.I.Es on the other. The N.C.E.R.T. keeps the S.I.Es informed of the various programmes which are being developed under it. All publications of the N.C.E.R.T. are necessarily sent to the S.I.Es. The S.I.Es. also keep the N.C.E.R.T. informed of all their plans and pro-

grammes and send the necessary literature to the N.C.E.R.T. The Department of Teacher Education is the connecting link for this purpose.

The orientation and training of the staff of the S.I.Es are arranged by the N.C.E.R.T. The Department of Teacher Education has so far completed the training of research, extension and publication workers of the S.I.Es. The S.I.Es also help the N.C.E.R.T. in carrying out its programme. They carry out certain studies and projects on behalf of the N.C.E.R.T. The Second All-India Survey of Elementary Teacher Education, sponsored by the Department of Teacher Education, is a part of such a cooperative project.

The S.I.Es are also free to refer their problems to the N.C.E.R.T. for guidance and solution. In such cases the N.C.E.R.T. strives its best to offer the necessary assistance.

Further collaboration can be achieved through the inter-visitation of the staff on an S.I.E. to sister institutions, and the exchange of publications. An S.I.E. can further seek the assistance of consultants from the N.C.E.R.T.

It has now been agreed that an S.I.E. should confine its attention at present to the improvement of elementary education, and to extend its scope to secondary education as soon as practicable.

THE ADMINISTRATIVE SET-UP

Finance. The State Institutes of Education have been established *de novo* and a provision of Rs. 65 lakhs has been made by the Centre for this purpose in the centrally sponsored sector and grant-in-aid on a 100 per cent basis has been made outside State plan ceilings, to meet all expenditure incurred in respect of the Institutes during the Third Plan period.

The expenditure on salaries and allowances will be roughly Rs. 1,25,000 and expenditure on programmes will be Rs. 75,000 for every Institute.

Location and Building. Since there was no provision for the construction of new buildings, each State Government was requested to house its Institute in an existing building at a centre, easily accessible from all parts of the State, and in close proximity of the Directorate of Education and the State Department of Education. The Delhi Workshop, however, recommended that every Institute should be located at the State headquarters. The scales of pay prevailing in the State have been adopted for the staff of its Institute and the total expenditure on each Institute is limited to Rs. 2 lakhs per year.

Co-ordination. In order to give technical guidance to the staff of various Institutes and for co-ordinating their activities, a Department of Teacher Education was created in the National Council of Educational Research & Training (N.C.E.R.T.) in 1964. This Department arranges for the orientation programme of the members of the staff of the State Institutes of Education and also gives such technical guidance as may be deemed necessary from time to time.

Staff. The Delhi workshop recommended that the head of the State Institute of Education be designated as the Director and his assistant as the Deputy Director. The Director of the Institute functions directly under the Director of Public Instruction. The existing staff pattern in an Institute is indicated below :

Principal or Director	...	1
Readers (one of whom to be the Deputy Director or the Vice-Principal)	...	3
Lecturers	...	6
Superintendent	...	1
Assistant	...	1
L.D.Cs.	...	8
Daftary	...	1
Peons	...	4

Approval of Programmees. Every State Institute of Education is having a Programme Advisory Committee and the programme of each Institute is approved by this committee. It also needs the formal sanction of the Ministry of Education, Government of India. The Department of Teacher Education of the National Council of Educational Research & Training (N.C.E.R.T.) provides guidance to every State Institute of Education, in case any specific problem is referred to it. The programmes and problems are also discussed in the yearly conferences of the State Institutes of Education. These are conducted regularly. So far four such conferences were held at Sehore, Madhya Pradesh (20th to 24th November, 1964), at Srinagar, (7th to 11th June, 1965), Bangalore, (20th to 24th December, 1965), and at Simla (26th to 30th June, 1965). These conferences were conducted by the Department of Teacher Education of the National Council of Educational Research & Training (N.C.E.R.T.).

ADMINISTRATIVE PROBLEMS

Equipment. Many of the State Institutes of Education are still housed in old buildings which are not suitable for this purpose. They do not possess adequate and suitable furniture and equipment. The Delhi Workshop prepared a tentative list of equipment and furniture, which every State Institute of Education should have. This requirement will be fulfilled as and when funds will be available. The Delhi Workshop also recommended that every Institute should have a jeep for an effective implementation of its programmes. This recommendation has been implemented.

Location. A few of the State Institutes are not located at the headquarters of the Directorates and State Departments of Education. Successive half-yearly conferences have stressed the need for removing the anomaly.

Allowances. A State Institute of Education has no vacations. Hence every workshop and half-yearly conference demanded the payment of additional allowances for its teaching staff in view of the hard and exacting nature of work in the S.I.Es. Already the States

of U.P. and Rajasthan have a system of paying some special allowances. The staff of the S.I.Es are paid the salaries in the scales applicable to the officers of the corresponding rank in the State Government Service, as the posts are interchangeable which is felt to be highly satisfactory. So, there is no scope for implementing higher scales of pay as distinct from the existing scales of salary prevalent in the State. It was also demanded that the staff of the S.I.Es should be paid full D.A. or a flat rate of Rs. 10/- per day whenever they attend the Conferences or Seminars organised by the National Council of Educational Research and Training at Delhi or elsewhere.

Budget. In the Srinagar Conference, a demand was made for increasing the budget over and above the present limit of Rs. 2 lakhs. But it was found that all the State Institutes put together could spend only Rs. 16.65 lakhs during 1964-65, while an allotment of Rs. 30 lakhs was provided for this purpose. The Bangalore Conference further pointed out that the financial allocation of the State Institutes of Education should not be uniform. On the other hand, it should depend upon the size of a State. Unless this is done, the programmes of large States are likely to be adversely affected. Thus the allocations for the State Institutes should be adjusted to meet the requirements of each State. Thus there is an urgent need for evolving a suitable formula for allocating grants to different S.I.Es, depending on the size of the State. In addition, factors like the number of elementary schools, teacher training institutions, inspectors, elementary teachers and teacher educators will have to be taken into consideration.

While the above recommendation is worth considering, it is encouraging to note that more funds will be available to the State Institutes during the Fourth Five Year Plan period. Besides the usual allotments from the Ministry of Education, the S.I.Es are free to receive grants-in-aid for specific programmes from the Ministry of Education as well as from the National Council of Educational Research and Training. The Ministry of Education has already given free gift of paper during the Third Five Year Plan period, and made separate grants for the appointment of Evaluation Officers. The N.C.E.R.T. also gave financial assistance for conducting programmes of Extension Centres. The Ministry has further agreed to bear expenditure for conducting Correspondence Courses for elementary teachers wherever an S.I.E. launches the scheme.

Amalgamation of Special Units. There are some functionaries or units in the State Education Departments at present whose main responsibility is to secure qualitative improvement in special branches like audio-visual education, evaluation, research, science teaching, etc. The officers of these areas are financed by Central and State Governments. The Delhi Workshop recommended that every State Government should bring all such functionaries or units, which are concerned with the qualitative improvement of education, within the orbit of its State Institute of Education.

Delegation of Powers. In order to facilitate the programmes of the State Institutes of Education, it was felt that adequate powers, both administrative and financial, should be delegated to the Directors of the State Institutes. The following are some of the special powers requested to be delegated to the Directors of the State Institutes of Education :

1. To sanction allowances to part-time employees ;
2. To sanction conveyance allowance to local participants ;
3. To incur expenditure on refreshments at meetings, seminars, etc. ;
4. To get the educational literature printed in local presses ;
5. To select resource personnel and to incur expenditure on their T.A. and D.A. ;
6. Payment of T.A. and D.A. to persons working on the preparation of hand-books etc. (for consulting libraries) ;
7. Payment of remuneration to authors, editors or hand-books etc. ; and
8. Payment to substitutes for persons deputed for in-service training.

The T.A. and D.A. of the State Government officers are met from the normal budget of the Education Department. They are generally paid a stipend of Rs. 3/- per day. The State Institutes should be further empowered to meet the T.A. and D.A. of the non-officials attending their programmes and to supplement the D.A. of the Departmental officers, when they attend the seminars organised by the S.I.Es.

Staff. It was recommended by the Delhi Workshop and the half-yearly conferences that the staff of the S.I.Es. should be appointed in consultation with the Director, in view of the special tasks they are required to perform. Further, a person appointed to an S.I.E. should not be transferred within three years, unless otherwise required. If he gets a promotion, it should be made effective in the S.I.E. itself as far as possible.

The Sehore Conference recommended that the qualifications of each member of the staff of a S.I.E. should be clearly laid down according to the nature of duties he is expected to perform. It was felt by the participants at the Bangalore Conference that the staff pattern should be redrawn to suit the four important functions of the State Institutes of Education (Research, Training, Extension and Publications) on the lines of the N.C.E.R.T. They should keep in view factors like number of teacher educators, training institutions and the number of supervisors etc. as the criteria. It was also suggested that the directors and at least members of the staff of each S.I.E. should be provided with rent free accommodation preferably in the campus of the institution itself. Free hostel accommodation should be provided to participants, who attend different courses and programmes conducted by the S.I.Es.

The director of an S.I.E. must be empowered to approve the tour programmes of the staff and his tours programme needs to be approved by the Director of Public Instruction.

Inter-State Visitations. It was recommended by the Delhi Workshop that the officers of one Institute should visit as many Institutes as possible for establishing mutual contacts and exchange of information and views besides meeting each other at the half-yearly conferences. In the Bangalore Conference, it was pointed out that at least the Directors should visit the Institutes of the neighbouring states for similar purpose.

Correspondence. The Delhi Workshop wanted that the State Institutes should be allowed to carry on correspondence directly with the N.C.E.R.T. and the Ministry of Education, Government of India, especially, in all matters other than finance or policy. Copies of the correspondence, however, should be submitted to the Director of Public Instruction of its own State.

PROGRAMMES OF STATE INSTITUTES OF EDUCATION

State Level Seminars. When the State Institutes of Education were first established, it was felt necessary to make the educated world aware of their objectives and programmes. For this purpose, the Delhi Workshop recommended the need for holding a state level seminar of about a week's duration in every State. The main objectives of the Seminar were :

1. To clarify the role and functions of the State Institutes of Education to the Senior Officers of the Education Department and to others concerned ;
2. To draw the programmes of the S.I.Es. for the next three years ; and
3. To work out the details of the manner of implementation of the programmes involving the officials and non-officials.

In addition to the above, it was considered necessary for each S.I.E. to examine the problems of elementary education, review the progress of the Third Five Year Plan, examine prospects for the Fourth Plan and to study school improvement programmes and the normal working of the Education Department. It was planned to invite all the agencies whose collaboration is necessary for the development of S.I.E. programmes. Hardly a few S.I.E.s conducted such State level seminars. States like Andhra Pradesh, Gujarat, Mysore and Orissa convened orientation conferences of district level officers and conducted seminars for headmasters, supervisors, teacher educators, and non-officials.

Improvement of Educational Administration. At the Bangalore Conference it was felt that the administration of education is almost out of gear and that red tape-ism is on the increase. Thus, there is an urgent need to minimise the paper-work and to release the human element of the administrator for the improvement of scheme

education. The problem being complicated it was decided that the State Institutes of Education should pool their problems in different areas and discuss them along with the Education Commission's Report in its next half-yearly conference.

Improvement of Supervision. The Delhi Workshop also recommended that the State Institutes should undertake research work on the nature of work entrusted to inspectors, methods of inspection, the guidance given by the officers of Panchayat Raj Department to the Extension Officers (Education), development of evaluative criteria for supervision, comparative studies of methods of inspection followed in different states and other countries, competencies required of supervisors and examination of inspection forms. It also suggested the need for the organisation of induction programmes for newly appointed inspectors and in-service training courses of 90 days' duration in small instalments at the interval of five years. It was felt necessary that the inspecting officers should be taken out of their daily routine and brought into living touch with recent trends in educational theory and practice through periodical seminars and conferences.

The State Institutes of Education are also expected to build up a close liaison with inspecting officers and offer consultative services whenever there is a difficulty or whenever an inter-alia problem arises. This can be accomplished through regular correspondence and personal contacts, whenever necessary and possible. This will also enable the S.I.E. to come across a number of problems for research.

The Delhi Workshop also proposed that each inspecting officer should adopt one elementary school for a comprehensive study. Every S.I.E. should further collect data on the status of elementary education for the entire State.

In a paper presented at the Bangalore Conference by Shri A.C. Deve Gowda, Director, Department of Extension Programmes for Secondary Education, it was pointed out that at present inspection depends largely upon the subjective views and observations of the inspecting staff, and that it is not comprehensive, as it is rarely carried out by panels of inspectors. Inspectors are further over-burdened with conducting multifarious activities, not directly connected with inspection work. Shri Deve Gowda apprised the conference about the studies and workshops conducted by N.C.E.R.T. regarding the development of criteria for inspection and the instrument for inspection and supervision of secondary schools. It was suggested that the State Institutes of Education should take up similar studies for developing suggested list of objectives, advance data sheet and check list, evaluation and commendations and recommendations for purposes of making inspection and supervision as objective as possible.

Several S.I.Es conducted short term in-service training courses ranging from 3 days to 6 weeks for supervisors. The supervisors

also took part in the district orientation conferences, wherever they were conducted.

IMPROVEMENT OF ELEMENTARY EDUCATION

Implementation of Compulsory Primary Education. In view of the constitutional obligations, the implementation of compulsory education for every school-going child is a national problem. The Srinagar Conference discussed thoroughly the practical difficulties in the implementation of this programme particularly in rural areas. Due to poverty, the parents do not want to send their earning children to schools. Some parents do not send their daughters to schools, since it is either against social custom or they are helpful to their mothers at home. Besides finding out solutions of these problems, it is necessary to find out the causes of irregular attendance like apathy of parents to punctuality and regularity; emotional imbalances at home, indifferent teachers, poor diet and health, bullies at school, too much home task given by the teachers, unattractive school atmosphere, lack of follow-up work to improve attendance. The State Institutes of Education should find out solutions to check them. They can take up surveys, experiments, case-studies, adoption of schools, creation of proper climate through production of literature and social education, etc. Many causes of wastage were initiated in several studies and a number of solutions have to be tried out in collaboration with training institutions like the provision of mid-day meals, uniforms, scholarships, books and other learning aids, part-time education, and any other methods possible. It should be noted the State Institutes of Education of Andhra Pradesh, Rajasthan, Orissa and some other States have taken up studies for combating wastage, stagnation and absenteeism.

School Improvement Programme. It was agreed at the Shore Conference that School Improvement Programme could be undertaken by each S.I.E. at least in the schools covered by its own extension centre. This programme should be experimented with a view to finding out the priorities and the methods to achieve the same. The areas for this programmes can be instruction, pupil-teacher ratio, equipment, school community relation, buildings and play-grounds, ancillary services like water supply and sanitary arrangements. Community co-operation should be enlisted in planning the school buildings, equipment, and ancillary services.

Almost all the S.I.Es have taken up some project or the other which directly or indirectly touches the problems of improvement of elementary schools in general.

Improved Instruction. Improvement of instruction in elementary schools is one of the most important responsibilities of the State Institutes of Education. For this purpose, the S.I.Es can take up projects like the problem of large classes, study of single-teacher schools, problems of Class I scholars, the problem of vocabulary used in primers and readers in Class I, etc.

The Delhi Workshop recommended that the Science Consultants should be attached to the S.I.E.s for the improvement of science teaching and that experimental projects should be taken up for the improvement of teaching of arithmetic in elementary schools. The S.I.E.s are now producing hand-books for the use of teachers. These hand-books will guide them in adopting better methods of teaching the schools subjects at the elementary stage. Such S.I.E.s should further select a few elementary schools for emperimental work. Another important programme of qualitative improvement is to bestow special attention to middle schools. The S.I.E.s may identify good teachers in elementary schools and the creative programmes evolved by them. These should be suitably publicised through journals and other literature.

The S.I.E.s have also the responsibility of developing the orientation programme of Basic education at the elementary stage. The Delhi Workshop also decided that the S.I.E.s should extend every possible help in the intensive teaching of craft at the middle school stage, by persuading the State Department of Education to provide specially trained craft-teachers, land and equipment. Some institutions may be developed as good Basic schools.

[IMPROVEMENT OF ELEMENTARY TEACHER EDUCATION

All India Survey of Elementary Teacher Education.- The Delhi Workshop thought that the State Institutes of Education have a special responsibility for the improvement of elementary teacher education. To get a clear picture of the elementary training institutions of the entire country, the S.I.E.s are advised to collaborate in the Second National Survey of Institutions of Elementary Teacher Education, conducted by the Department of Teacher Education.

At the Bangalore Conference a proposal was discussed and agreed upon for conducting this survey, for assessing the present status of the training schools and to plan elementary teacher education to meet the requirements of the States. The questionnaire for this survey has been prepared by the Department of Teacher Education. Every State Institute of Education was further requested to collect the relevant information from all the elementary teacher education institutes situated within the State.

Syllabus Committee's Report. In order to provide an effective syllabus for the institutions of Elementary Teacher Education, the National Council of Educational Research and Training appointed a Syllabus Committee for the same in 1964. The Srinagar and Bangalore Conferences discussed the work of the Syllabus Committee. The Committee collected the necessary information through spot-surveys, questionnaires and interviews with educationists involved in the preparation and employment of elementary teachers. Evidence was recorded from administrators in charge of Basic training, principals and lecturers of Basic training schools, experienced Basic school teachers, educational thinkers and scholars, parents and community

members interested in education, besides making use of previous committee reports and documents. The Committee brought under its purview matters relating to the preparation of teacher educators and educational administrators, administrative matters and in-service education.

The interim report of the Committee was presented to the Srinagar Conference of Directors of S.I.Es. with a request to discuss the same with their staff and some heads of training schools and send comments. The final report was presented to the Bangalore Conference by Dr. S.N. Mukerji, the Chairman of the Committee. The report included programmes of instruction for post-middle candidates, post-secondary candidates and for graduates. A small sub-committee of four was appointed by the Bangalore Conference to consider the details and draft recommendations of the Committee. The Bangalore Conference approved the Syllabus Committee's recommendations of the report and suggested that copies of the same be submitted to the Indian Association of Teacher Educators, Central Advisory Board of Education and the Education Commission. It made a list of fourteen salient recommendations to be referred to the State Government for implementation. The final report of the Committee was also discussed at the Seventh National Seminar of Elementary Education which was held at Kodaikanal in April 1966.

Research. The Delhi Workshop recommended that the S.I.Es should take up researches in the methods of teaching adopted in the training institutions, methods of examination, arrangements made for practice teaching, study of social, economic and academic background of the trainees, evaluative criteria for the inspection of training institutions, selection procedures in admitting student teachers, etc.

Training and Extension. The Delhi Workshop also held that the S.I.Es should undertake training programme and induction courses for freshly appointed teacher educators and some in-service training courses for elementary teacher educators. They are further expected to provide extension service to training institutions, elementary teachers, and to take up experimental work in training institutions.

Literature. Many S.I.Es have started researches, training, and extension programmes for the improvement of elementary teacher education. They are further expected to turn out literature in the regional languages which will be of use to teachers and teacher-educators at the elementary level. They can also run a professional journal. A few S.I.Es have already started their own journals.

The S.I.Es are expected to prepare hand-books for the use of teacher educators, dealing with special problems in which the training institutions are interested. The Sehore Conference discussed the importance of the production of hand-books for raising the professional insight, understanding and stature of teacher educators. The following areas were suggested :

1. Community Life in School and Hostel;
2. Planning and Supervision of Practice Teaching;
3. Crafts;
4. Evaluation of sessional work;
5. Problems of Elementary Schools; and
6. Dynamics of Teaching (a series of hand-books).

While recommending these areas and topics for the production of literature for teacher educators, it was pointed out that the co-operation should be sought of agencies like the N.C.E.R.T., training colleges, University Departments of Education, field workers, and retired educationists.

In fact, the Department of Teacher Education produced a model hand-book in the teaching of psychology to elementary teacher educators. Many S.I.E.s are planning the production of such hand-books. The S.I.E. Gujarat is ready to publish the following two hand-books on :—

1. Education, Community Life, and Evaluation of Question Papers; and
2. Crafts, Objectives of Teacher Education Programmes and Techniques of Making Teacher Education Programme Effective.

Correspondence Courses. The S.I.E.s may organise correspondence courses for clearing the backlog of untrained teachers. It was suggested at the Srinagar Conference that the period of correspondence education intended for untrained teachers should be for a period of two years and the examination should be common for the regular students and those under the correspondence scheme. The Ministry of Education was requested to consider the feasibility of launching this programme throughout the country.

Board of Teacher Education. In order to improve the quality and content of Elementary Teacher Education, the Delhi Workshop suggested the establishment of State Board for Teacher Education, covering the entire field from pre-primary to secondary levels. This Board may be entrusted with the functions of preparing programmes, prescribing standards, recognition of institutions, inspection, preparation of curricula, conducting examinations, awarding of diplomas, co-ordination of training programmes working in the field. It was suggested that the Director of Education should be the ex-officio Chairman of the Board, the Director of the S.I.E. should be the Vice-Chairman, and a Class I officer of the Institute should be the ex-officio secretary, and consisting of persons representing secondary teachers' colleges, principals of elementary teachers' Institutions and persons nominated by Government to include educationists, and representatives of Zilla Parishads and Legislatures.

This recommendation has been examined by a number of committees. The Kothari Commission is likely to offer its final verdict on the suggestion.

Improvement of Science Teaching. The Srinagar Conference discussed the methods of improvement of science teaching. The Second National Seminar of Science Consultants emphasized the need for the improvement of teacher training programme, in-service programmes for elementary teachers, orientation of the science staff of the S.I.Es and preparation and production of supplementary reading material in science. It was pointed out that Science contents should be taught in training institutions and that methods of science teaching should be an independent course and not as a part of general methodology. It was felt that a two-year course of Science contents and methodology should be drafted.

The elementary teacher educators are generally trained at the training colleges in the methods of teaching science at the secondary level and as such they are not conversant with the needs of elementary schools. Thus, there is a need to orient them towards the teaching of science at the elementary level. To achieve this, it was considered necessary to equip the Science staff of the S.I.Es with the necessary science background with the help of the Department of Science Education of the N.C.E.R.T. The Conference further recommended that every elementary teacher education institution should have a Science graduate teacher and a small laboratory, that the elementary teacher educator of science should have further training in biological sciences, physical sciences, geology, astronomy, physiology and hygiene, and that the S.I.Es or the Institutes of Science should organise short refresher courses on these lines.

Improvement of the Teaching of Social Studies. The Srinagar Conference also considered it urgent to improve the teaching of social studies both at the school and training school levels. Now there is hardly any agreement on either the scope or the content of the subject or its organisation for class-room teaching. Anything and everything is passed under the label of social studies. There is a mushroom growth of concepts, problems and practices on this subject, according to a study conducted by the Department of Curriculum, Methods and Text-books of the N.C.E.R.T., there is a general lack of proper outlook and attitudes, clarity, properly articulated curriculum, instructional material, and properly qualified and trained teachers. It was recommended that the S.I.Es should take up studies in the use of social studies text-books in the class-room, and prepare good hand-books, pamphlets, etc. on the importance and teaching of social studies. The elementary teachers require to be given in-service training for the teaching of social studies, and this can be achieved provided the training schools have competent staff for the purpose. The S.I.Es have been entrusted with the responsibility, and the Department of Curriculum, Methods and Text-books (DCMT) of the N.C.E.R.T. has offered to organise one such course in every State. The D.C.M.T.

has agreed to help the S.I.Es in developing good text-books for elementary schools if they can undertake such an activity. It was resolved that the S.I.Es should produce literature in social studies and convene seminars for this purpose with the resource personnel supplied by D.C.M.T. also to get the consultants services from the D.C.M.T. whenever necessary for curriculum construction and text-book production.

Craft Teaching. The Srinagar Conference also discussed the weaknesses of craft teaching in the schools and training institutions. It was felt that objectives of craft teaching are either not defined or too much or too little time is devoted to crafts. There is dearth of good books on crafts. They are not selected with reference to particular environment, specialist craft teachers are not posted, non-specialist teachers are not oriented to supervise correlated and craft-centred lessons, the teacher educators drawn from secondary schools and the mechanical craftsmen do not understand the concept of craft-centricism, proper facilities do not exist; and experimental schools are not provided. The State Institutes of Education have been directed to conduct studies in collaboration with the Department of Basic Education of the N.C.E.R.T. on the objectives of craft teaching for different age levels, determining standards of achievements, etc. The craft teaching programme has to meet the challenges of industrial age. Surveys of crafts with educational potentialities have to be conducted. Reference material has to be prepared. Evaluative techniques for the assessment of outcomes have to be developed, and the maximum size of a class for teaching a particular craft has to be decided. Statewise surveys of the place of craft teaching in Teacher Education are to be conducted. The co-operation of the S.I.Es has been sought to solve all these important problems in the craft teaching programme both at the school and Teacher Education levels.

THE DEVELOPMENT OF PROGRAMMED LEARNING MATERIAL FOR USE IN ELEMENTARY TEACHER TRAINING

The Department of Psychological Foundations of Education of the N.C.E.R.T. is conducting experiments to study whether the method of programmed learning can be used for solving some of our present problems in the training of primary teachers. It has proposed to prepare some teaching units. It was noticed that some topics from descriptive statistics were introduced in the syllabi of primary teacher training. But very few teacher education institutions are equipped to handle the material, which could be used in such courses. In many institutions, the teacher educators themselves do not have sufficient orientation to teach this topic. Hence the State Institutes of Education may think of popularising the self-instructional material, proposed to be prepared by the Department of Psychological Foundations, in consultation with the S.I.Es to fix up priorities of topics for programming. The S.I.Es can think of the possible ways of using such material. It was proposed to train the

SIE workers in the programmed instruction techniques through a seminar to be organised by the Department of Psychological Foundations.

Practice Teaching in Training Schools. Teacher education is failing today because of its ill-organised and stereo-typed practice teaching programmes. So, the practice teaching programme should be reorganised with a view to orientate the prospective teachers in the entire task of teaching including planning for educational experiences, organisation, execution and evaluation. Pupil-teachers fail to relate their teaching with the objectives of education, and inter-relatedness of the curriculum. Practice teaching at the elementary level appears to have failed to develop the basic skills of reading, writing and computational abilities in the educands. The follow-up adjusting teaching to individual needs of pupils is to be taken care of. The pupil-teachers should also get sufficient practice in curriculum organisation, they have to respect the subject-matter sequence in planning the lessons. These should be units of an organised curriculum. It is necessary to have the conception of ultimate and proximate purposes, follow-up and evaluation of achievements. Some training is necessary in handling multiple classes. Pupil teachers should also get training in procuring, preserving and improving teaching material. After discussing these points for the improvement of practice teaching, the Conference recommended that all S.I.Es should conduct a study of the problems of practice teaching in their States and recommended remedial measures. The findings should be made available to the Department of Teacher Education for drawing an all-India picture.

The S.I.E. of Rajasthan conducted an experiment of reorganisation of teacher education programme to keep accord with practising schools. This was done at Teacher Training School, Kapasin. The objectives were to organise practice teaching in a way so that it proves as an asset to the practising schools and brings about an improvement in them. It was further aimed to make them better in comparison with those where the trainees do not go for practice-teaching, and to make the headmasters and teachers of the practising schools active participants in the functioning of the joint role of the training schools. This experiment was discussed at the Bangalore Conference.

PROFESSIONAL GROWTH AND PREPARATION OF ELEMENTARY SCHOOL TEACHERS

The State Institute of Education, Ahmedabad, launched a scheme of "Group Centres". Accordingly, four districts of the State were selected and each district has been divided into one hundred group centres. Every centre is located either in a training school or a secondary school or a good primary school in the order of preference. All the teachers under the jurisdiction of each centre live within a radius of five miles. They meet once a month to discuss their professional problems. The State Institute has prepared the guidelines for the organisation of these group centres and has provided every

centre with a set of professional books costing Rs. 60/-. Each member of the staff of the S.I.E. has to attend four to five meetings of the group centres every month. It is for other S.I.Es to organise similar schemes. The Andhra Pradesh has launched a scheme of "Centre Classes", but it should be more effective.

At the Bangalore Conference, the working of the group centre scheme was further discussed. It was said that the scheme aims at mobilising human efforts so as to keep up and upgrade professional efficiency of elementary teachers through interpersonal communications among elementary teachers and through educational guidance given by secondary schools teachers, elementary teacher-educators and inspecting officers. As the limit of five miles distance has been prescribed for each centre, the number of schools and teachers under each centre are from 5 to 20 and 15 to 100 respectively. The activities include demonstration lessons, paper reading, organisation of symposia, an exhibition, free discussion as regards teaching of various subjects, lectures by experts, etc. The teachers are not paid any travelling allowance, but are served light refreshments from the funds collected by the local community. The S.I.E. wants them to meet once a month, but the centres meet at least for six times in an academic year.

The Bangalore Conference discussed the various ways of making the professional preparation of teacher educators more effective. A post-graduate course at M.Ed. level for teacher educators and educational administrators was suggested. The Department of Teacher Education has started a pilot course from August 1966 for the Elementary Teacher Educators. The S.I.Es. are requested to continue with the induction programmes for new entrants to the profession. These induction courses to new elementary teacher educators may be of three months' duration and organised on a large scale. Further the Conference suggested the organisation of orientation courses for teacher-educators, who did not have training in Methods of Elementary Education, refresher courses for those who underwent the types of training mentioned above, and correspondence courses for further education. The Conference also recommended the institution of granting 'furlough leave' or 'Sabbatical leave' and a programme of exchange of teacher-educators and administrators to enable them to gain a comprehensive knowledge of their interrelated fields of work. Study leave should be easily granted if the incumbents choose to take advanced training in the field. It was recommended that an inter-disciplinary team of social science experts and educationists should be appointed to examine critically the various elements which constitute the job of the teacher-educators and educational administrator for formulating analysis and constructing suitable syllabi for teacher education. The Conference recommended that the State Governments should treat teacher-educators and educational administrators, attending the in-service seminars and conference courses, on duty and pay them the T.A. and D.A. as per rules.

A number of measures proposed by S.I.Es touching in-service education have been discussed earlier. The Sehore Conference discussed the syllabus for in-service training of teacher-educators and inspectors. A committee of seven members was appointed to prepare the syllabi for the two types of courses.

STATE INSTITUTES OF EDUCATION AND FOURTH-FIVE-YEAR PLAN

The Srinagar and Bangalore conferences discussed the broad frame-work of the future programmes of the S.I.Es during the Fourth Five-Year Plan. Assuming that enough funds would be provided, the conferences discussed the broad frame-work of Fourth Plan prepared by the Department of Teacher Education, which could be detailed by individual states keeping their specific needs in view. It was decided that overlapping should be avoided in programmes taken up by different State units like Science, Evaluation, Guidance, etc., and priorities of research should be fixed, so as to utilise the sanctioned funds in the best possible manner. The Bangalore Conference recommended that the grant of Rs. 2 lakhs should be continued by the centre, as the States may not take this as committed expenditure during the Fourth Plan period. The broad frame of the Fourth Five-Year Plan is given below :

A. *Improvement of Instruction in Elementary Schools*

- (a) Pilot projects in selected elementary schools for improving retentive power of schools and regularity of attendance, enlisting community co-operation and help in equipping schools, improving craft teaching.
- (b) Preparation of guide-books for the professional growth of elementary school teachers.
- (c) Correspondence education, in-service training of elementary teachers.

Children's literature :

- (i) Review of existing literature.
- (ii) Supplementary reading material in different subject areas.
- (iii) Leadership and advisory role of the S.I.Es for private publishers and government agencies.
- (iv) Improvement in curriculum and evaluation practices of elementary schools. Role of S.I.Es. for bringing about reforms in this area.

B. *Improvement of Elementary Teacher Education*

- (a) Study of elementary teacher training institutions in the State and preparation of the blueprint for a good and efficient teacher training institution of optimum size.
- (b) In-service courses for elementary teacher-educators (this may be planned as part-time and through correspondence).

- (c) Reforms in evaluation practices of elementary teacher training institutions : survey and experimentation.
- (d) Preparation of hand-books and other reading materials for teacher educators.
- (e) Developing experimental programmes to induce elderly women to enter the teaching profession through concurrent courses of 3 or 4 years' duration. (Professional and academic courses up to the matriculation level).
- (f) Experimentation in extension work.

C. *Improvement of Supervision*

- (a) Research projects for developing criteria for supervision/inspection of elementary schools.
- (b) Preparation of hand-books and guide-books for supervisors/inspectors.
- (c) In-service courses for supervisors.

D. *Clearing House Function.* Basic information relating to all aspects of education in the State. Basic Data Unit to be established in the S.I.Es.

E. *Co-ordination and Collaboration with other agencies*

- (a) Between the Department of Teacher Education and individual S.I.Es.
- (b) Between groups of S.I.Es.
- (c) Between all S.I.Es and the Department of Teacher Education.
- (d) Between S.I.Es and Universities and other research institutions.

CONCLUSION

Appendix Four gives full details of the activities of the various State Institutes, which they have either completed or are likely to complete very shortly. The activities are of four types : research, training, extension and publications.

INTRODUCTION

In-service Education may be defined as continuing education of teachers and other educational workers leading to the improvement of their professional competence. Such education may be offered by a teacher training institution. It may, however, be provided by institutions other than teacher training institutions. It may be offered to teachers in service, trained or untrained. Looked at from a wider concept, in-service education may also be called Educational Extension. For the purpose of this Chapter, however, in-service education and extension would be used as synonymus terms.

Need

The need to render in-service to teachers can hardly be over-emphasised. There are various reasons which lead to this conclusion. Some of these are as described below.

A large number of teachers both at the secondary as well as primary level are under-qualified or inadequately or unsuitably qualified. Also, there is a great backlog of untrained teachers. These teachers need assistance to be better teachers. There are also many teachers, who are suitably qualified. But training given to them needs to be refreshed. During the pre-independence days we wanted to produce a particular kind of individual. But now we want a different kind of individual. Teachers trained to produce that kind of individual need to be oriented to the new needs of the society.

Knowledge is fast expanding and in science, it is said, it is doubling itself every ten years. There are many areas of human endeavour in which changes occur and those changes demand corresponding changes in education and therefore in the educator. The frontiers of human knowledge in various fields are expanding rapidly. Changes in basic concepts and theories in allied disciplines such as psychology and sociology necessitate corresponding changes in educational theory and practice. New pedagogical techniques and skills are also innovated. Social changes are also fairly rapid in the form of acceptance of new social values, development of new social needs and demands and so forth. They have educational implications. These developments and changes necessitate corresponding changes in educational

objectives, curricula, methods and so on. And since pre-service is just a stage in itself, it cannot serve the purpose. In-service is the agency capable of doing so.

Though the need for in-service education for teachers was felt quite early, it was the Secondary Education Commission which gave the first effective note in respect of in-service education at the secondary level. It said, "However excellent the programmes of teacher training may be, it does not by itself produce an excellent teacher. It can only engender the knowledge, skills and attitudes which will enable the teacher to begin his work with a reasonable degree of confidence and with the minimum amount of experience. Increased efficiency will come through experience critically analysed and through individual and group efforts at improvement. The teacher training institution should, therefore, accept its responsibilities for assisting in this in-service of teacher training".

EXTENSION SERVICES FOR SECONDARY SCHOOLS

However, the first concrete step towards achieving this end was taken by the Ministry of Education by establishing the All-India Council of Secondary Education with the assistance of the Ford Foundation and the Technical Cooperation Mission. The Council opened a number of Extension Services Centres and located them in secondary teachers' training colleges. The Council, which was later on renamed as the Directorate of Extension Programmes for Secondary Education and is now named as the Department of Field Services, proved a dynamic agency for introducing innovations and helping schools to become conscious of the need of identifying problems and seeking solution for them. It also helped training colleges to get into closer touch with schools and develop practices to suit the needs of the schools.

EARLY EFFORTS AT PRIMARY LEVEL

No organised effort at introducing in-service education at the elementary level was made till 1962. However, some kind of work was going on in some States. One popular practice was the organisation of monthly or bimonthly meetings of teachers of an area in what is usually called a Central School. The meeting was usually attended by the headmasters of the schools of the area. Occasionally, the inspector or the supervisor also attended. At the meeting, the teachers gave demonstration lessons and discussed some administrative and organisational problems. The inspector utilised this opportunity to collect data regarding schools for his own purpose. The scope of these meetings, however, was very limited. It did not by and large discuss new methods of instruction or innovations necessary to introduce in schools. Perhaps neither the teachers nor the inspectors saw the need to do so. An effort of major importance was made by all States and the municipal corporations in their attempt to organise orientation courses for converting non-basic schools into the basic pattern.

Refresher courses for headmasters of Basic schools were organised by some States during summer vacations.

The first organised effort for offering in-service education was made by the Department of Education of the Municipal Corporation of Delhi. Under the guidance and inspiration of Mr. J.P. Naik, the then Adviser, Primary Education, Central Ministry of Education, the Department reorganised its set-up and created an extension and research wing in 1959. This wing carried out in-service programmes for the teachers of schools of the Corporation and conducted research in the problems faced by the Department and teachers.

EXTENSION SERVICES FOR PRIMARY SCHOOLS

The useful work done by the Directorate of Extension Services for Secondary Education and perhaps by the Extension Wing of the Municipal Corporation of Delhi to some extent, helped in thinking and developing a similar scheme at the primary level for the entire country. It began to be realised increasingly that if in-service is necessary and useful at the secondary level it is all the more so at the elementary level. The National Council of Education Research & Training, whose main objective is to bring about qualitative improvement in education, therefore, took a decision to establish a primary extension services organisation which would prove as the nucleus for developing techniques and procedures for working with the training schools and schools which may be utilised later for improving education at a wider level. Accordingly 30 Extension Services Centres were opened in 1962. Fifteen more centres were opened during 1964-65. These were attached to State Institutes of Education. All the extension centres are organised, guided and supervised by the Department of Basic Education of the National Council of Educational Research & Training. The details of the entire programme are given below :

The Scheme

Organising Extension Services. The project may be described as the Extension Services Project for primary training institutions with the main object to help the staff of the training institutions to initiate, plan and organise work for the in-service training of teachers in the areas in which they are located. It should be appreciated that the major function of this programme is to work with the staff of the training institutions in the initiation, planning and development of the field activities. These might be generally classified as follows :

- (a) To encourage primary schools in the surrounding areas to improve themselves, (*viz.*, the effectiveness of teachers, school community relations, details of the syllabus and their implementation etc.) through the provision of consultative resources and grants provided. This major purpose makes it clear that the general orientation of the project should

emphasise the experimental and consultative approach rather than the dogmatic and directive approach. The statement of this purpose also makes it clear that most of the actual consultative services are to be provided by the staff of the training institutions. The major responsibility of the Coordinator is to coordinate and provide the necessary guidance and grants.

- (b) To facilitate the vitalisation of the teacher training curriculum by means of closer association with schools. One of the serious criticisms made of teacher training institutions is the isolation of the institution from the real situations in which the schools function and in which the trainees will be called upon to work. One of the indirect but nevertheless important functions of the office being established would be to facilitate the more intimate association of members of the training school staff with the purposes and activities of primary schools.
- (c) To coordinate field studies and research designed to determine, analyse the reasons for, and improve the quality of the primary school programmes.

These field studies might be of two general types. Group one would be the continuous kind of study that is necessary in order to provide consultative services. The second type might represent studies that are initiated by DBE but require the close collaboration of field agents for the accumulation of data. Problems of study may well refer to wastage and stagnation, incentives for free and compulsory education, improvement on basic education lines, etc.

These three major purposes of improvement of schools, viz., improvement of teacher-training programmes, encouragement and coordination of field studies and research will direct the activity of these extension services for primary schools. Their main work will consist of helping teachers to develop a programme of improvement in their schools. For this purpose, the Extension Services will take up a group of schools as a unit and for each unit the concerned training institutions will prepare a developmental programme for specified period of time. This developmental programme will be carried out in various ways, some of which are suggested below :

1. In-service Training :—Through seminar and refresher courses for headmasters and teachers of the primary schools and community leaders. This will pertain to school-subjects, teaching methods, general information, production of simple aids and equipment, craft work and school community relations.
2. Dissemination and Discussion :—Through publication of guide-books etc. lectures and consultation by experts, demonstrations, workshop and conference, exhibitions etc.

3. *Visits and Consultations* :—By members of the staff of the training institutions and Extension Services Centres, inter-school visits by teachers and similar activities. These programmes are only suggestive.

Staff of ESPS

It is desired that the personnel in each such project should include one full-time person as the coordinator and one full time clerk-cum-typist. It is essential that the trainees in the teacher training institutions as well as staff-members will be involved in the Extension Services for primary schools. The details are given in Appendix 1.

Much of the success of the programme will depend on a careful selection of the coordinator. He should have a professional zeal, and should be able to secure the cooperation of his colleagues. In addition to the advantages that would obtain from careful selection, arrangement would be necessary for the initial and continuous in-service training of principals, coordinators and staff-members at the National Institute of Basic Education (Department of Basic Education). Subsequently there will be training camps for each of the training institutions to include the teaching staff, trainees and staff members of the school concerned in the region.

Relation to Department of Basic Education

The relationship of the Extension Services Project to the DBE will be somewhat similar to the relationship that exists at present between the Extension Services Centres and the Department of Field Services, of course suitably modified and adapted to the special requirements of the primary school teacher whom it is expected to serve. This Department maintains at present an advisory and supervisory control over the Extension Centres, guides them in organising their programmes from year to year, coordinate their activities with the needs of the secondary school as well as with the larger programmes in secondary education initiated by it, and carries out periodic assessments of the work of the Centres. Similarly the DBE will have to shoulder responsibility for the initiation, development and coordination of the functions of the Extension Departments. It will also have to provide periodic training to the personnel of these projects and also prepare 'packaged' materials which may be used at conferences, demonstrations, workshops etc. These materials would, it is expected, provide the coordinators with necessary instruments for implementing in-service programmes. A statement of decisions taken in regard of the operation of the schemes of extension services centres in training institutions for elementary education is given in Appendix.

The Programme

The Extension Scheme has programmes at two levels, viz., the Department of Basic education and Extension Centres.

DEPARTMENT OF BASIC EDUCATION : Guidance and Supervision. The Department has the responsibility of guiding and

supervising the work of Extension Services Centres. This is done by holding training courses, workshops, seminars, conferences, visits to centres and its associated schools, and production of literature.

Holding Training Courses, Workshops. The Department also organises training courses for the honorary directors, coordinators, teacher trainers and other personnel. This training is offered to newly appointed workers. Training is also provided when a new programme is introduced.

Initiating or Suggesting New Programmes. The Department may like to suggest or initiate new programmes. It may, for instance, suggest taking up the minimum Basic education programme or experimental projects or action research, or teaching in large classes or single teacher schools, etc.

Techniques. One of the main objectives of the scheme is to develop the methods of working with schools. It is, therefore, the responsibility of each extension centre to develop techniques of extension. It is also the responsibility of the Department to develop techniques of working with extension workers and schools. In order, therefore, to gather first hand experience, the Department has taken up a project of working intensively with the Darya-Ganj Extension Centre and three schools in Delhi. The main purpose is, as stated earlier, to develop techniques of extension so that the experience gained can be shared with other workers.

Holding Conferences. (1) Work Conferences :—Occasionally a meeting at the national level is organised to enable coordinators and honorary directors to review work done, exchange experiences and discuss problems from a national point of view. A conference like this provides unique opportunities to know and benefit from what workers at the different corners of the country are doing.

(2) Regional Conferences :—For purposes of administrative convenience, all extension centres are divided into four regions, North, East, West and South. Regional conferences are held every year. The main purpose of holding these conferences is to get into close touch with each centre of the region and try to know its working closely. It also offered chances of sharing experiences, of looking into the possibilities of introducing new programmes or of evaluating in a general way existing programmes and of preparing plans for future in the light of discussion and experiences. These conferences promise to prove very useful.

(3) State level Conferences :—It is essential for the success of an extension centre to secure the cooperation of the State Department of Education. A centre has a number of problems, administrative as well as academic. These can be easily solved by getting into close touch with the Department. At the secondary level it has been experienced that the efforts of an extension centre achieve much better success whenever inspectors are involved in its work. Occasionally,

therefore, conferences are held with State Departments of Education to discuss various problems of each centre. The Departments are also requested to suggest areas of work or specified projects or programmes which can be carried out by the centres.

Since it is not possible to hold such conferences at the national level often, the Department of Basic Education is requesting the State Institutes of Education to organise such conferences in their respective states every year. It is hoped that State Governments will accept the proposal and depute their representatives to attend the conferences and make them successful.

Extension Centres. The main work of extension, however, is done at each centre. The centre works closely with 50 associated schools situated around a radius of 10 miles from the place where the training institute is situated. It organises various kinds of programmes for them. The principles for arriving at the programmes are the needs of the centre, the State and the Department of Basic Education. These are given below :

The needs of the Centres. The function of the centre is to improve the schools. Their needs, therefore, are the most important. The programmes of the centres consequently are based on their needs. The centres have developed a procedure of knowing these needs.

The needs of the State. The centres have to know the needs of the State. For this purpose the coordinator and the honorary director get in touch with the State authorities and the concerned inspectors of schools, know their requirements and plan work to meet these needs.

The needs of the Department of Basic Education. The Department of Basic Education suggests some new programmes to the centres. This is done at the regional conferences, state level conferences, personal visits and the launching of specified programmes like teaching in single teacher-schools, experimental projects, etc.

PLANNING WORK FOR THE YEAR

An Extension Services Centre prepares a plan of work for the year. In planning for it, it consults the concerned schools, the State Department of Education, the members of the faculty of the training institutions, the State Institutes of Education and the Department of Basic Education. The plan thus prepared is submitted to an advisory body for its approval. While planning, all aspects of work as, for instance, curricular, co-curricular, organisational, administrative and arts and crafts are kept in mind. The programmes are of various types, which will be evident from the following account.

In-service Programme. Each centre uses various kinds of techniques for imparting in-service course to teachers. These are seminars,

workshops, orientation courses, demonstration lessons, discussions etc. An amount of Rs. 2,000 has been provided to meet the T.A. and D.A. of those teachers who come to attend these courses. Under this programme, an attempt is made to cover all areas of school work.

Audio-visual Programme. Primary schools usually do not have necessary teaching aids but the importance of audio-visual services at this level is indeed great. Provision has been made in the grants for an amount of Rs. 3,000 for the purchase of the audio-visual apparatus. Most of the centres have purchased films, scripts, projectors and they are projected to the teachers when they come to attend the in-service courses and also occasionally in the school. The in-service courses are also held for preparing these aids. A recurring grant of Rs. 500 per annum is allocated to each centre to organise exhibitions and audio-visual services. The centres are holding exhibitions in different schools.

Library Services. Each centre has been provided with a grant of Rs. 2,000 for the purchase of library books. The centre makes efforts to improve the reading habits of the teachers in the area and adopts various methods of doing so. The books are being used during seminars, workshops, etc. and they are also loaned to certain schools from where the books are issued to the different schools. The library has some books for the use of children also and these are loaned out for their use. A recurring grant of Rs. 200 is given for the purchase of new books.

Grants in aid to Schools. A special provision of Rs. 5,000 has been made to help schools in carrying out improvement programmes of work in schools and meeting the necessary expense in carrying them out.

Experimental/Promotional Project. There is need to introduce experimentation of some kind in primary schools and to encourage willing and enthusiastic teachers to experiment with new ideas, techniques and methods. This is particularly of significance for teachers, who teach in classes I and II. A beginning has been made in the direction at the secondary level. An effort is being made at the primary level too. The problem, however, is more difficult at the primary level. It has been experienced that teachers do not see the need of any new approach. It has also experienced that they take time in understanding a new approach and much more a scientifically developed experiment or experimental project. Extension worker, therefore, has to plan carefully and he has to begin with this poor background of the average teacher.

The results of launching this programme need to be followed closely and the reports of successful ones to be published for the information of other workers in the field. It will also be necessary for teacher training institutions to take initiative in this. In fact, some of the institutions could themselves launch programmes in schools around.

School Improvement Programme. School improvement programme is a comprehensive term. The entire effort of extension is directed towards bringing out improvement in schools. The school improvement, therefore, has to be conceived in terms of each individual school. Each school needs to develop in its own way and on its own speed. This is a difficult and slow process. Occasionally some enthusiastic extension worker wants speed and also a few of his own choice programmes to be carried out by a school. Occasionally also an extension worker feels that teachers need to know more and therefore it is the duty of the extension worker to enlighten the teacher and broaden his horizon of understanding. A feeling like this, however true honest and sincere, may not have much value for the teacher. If it has, the programme may be included, if it is not, there Extension worker must work patiently till proper opportunity comes.

Intensive Work. The centres work intensively with a few schools. The main purpose of working intensively with these schools is to provide them with continued guidance so as to enable them gradually to become good and model schools. The schools under this programme identify their weaknesses, their strengths, their aspirations and draw out detailed plans of work for working intensively in each area and covering all aspects of work gradually in a phased manner. The entire programme is planned on the needs of schools. Teacher, student and each one works in his own sphere for the fulfilment of the programme.

Science Corners. Science education is fast receiving the attention it deserves. The syllabus, methods of teaching, the equipment, the training and orientation of teachers, and other aspects are receiving attention. A scheme to catch students with a science talent has been launched at the secondary level. Science clubs have been started in Secondary Extension Services centres and schools. At the primary level also some thinking has begun. There is need to introduce a new approach to the teaching of science and introducing such activities as could interest children in developing curiosity and a spirit of enquiry. Just as there is a movement for establishing science clubs at the secondary level, there is need for developing science corners in primary schools.

Publications. There is a dearth of good and useful literature for teachers at the primary level. Extension Services are in an enviable position to produce such materials. At present some centres do bring out some publications. But the nature, variety and quality of it leaves much to be desired. Most of the publications are reports of workshops and annual reports. These publications are useful.

In bringing out publication, however, attention needs to be paid to the need of teachers at the moment. These needs can be met to a large measure, if the literature published pertains to :—(a) Methods and techniques of teaching, (b) Methods and techniques of extension, (c) Instructional materials for teachers and students, (d) Audio-visual

aids, (e) good, tested and promising practices., (f) accounts of useful projects and action research, (g) newsletters, and (h) reports of workshops, seminars and annual reports.

SPECIAL PROBLEMS

There are a number of problems facing extension. These are enumerated below. Suggestions for tackling them have also been given.

Primary Extension a State Concern. The problem of extension at the secondary level has been comparatively easy. The number of training institutions is about 250 and the extension services centres have been established in 104 colleges so far. It is possible to open the extension services centres in many more and perhaps in all in due course. The problem, however, is difficult at the elementary level. There are over 1,400 teacher training institutions at this level. The National Council of Educational Research & Training has, as stated earlier, opened thirty extension services centres in thirty training institutions and fifteen more in the State Institutes of Education.

If in-service is really important and useful, it follows that there is need to open as many extension services centres as possible. This of course is difficult for the National Council of Educational Research & Training and even the Ministry of Education to achieve. Even, however, if it were not difficult it would not be advisable for the obvious reasons of administrative convenience and academic guidance. Offering in-service should essentially be a state responsibility.

The question of opening extension services centres in all training institutions is indeed difficult. It has large financial, academic and administrative implications. The number of teachers who need in-service at the elementary level runs into lakhs. How can in-service be provided to all these teachers? One approach to the solution of the problems has been the opening of State Institutes of Education. The institutes are required to re-orient teacher educators so that they can vitalise their training programmes. They are also required, as stated above, to re-orient inspectors and supervisors and other officers of the Department of Education so that they know the latest developments in education and help teachers accordingly.

Widening the Concept of Teacher Education Institutes. Another solution to the problems is to widen the concept of a teacher training institute and make in-service as integral part of its work. The present position in this regard is not happy. An extension centre today is not an integral part of a training institution. In fact, there is very little coordination between the work of an extension services centre and that of the training college. The college staff does not actively assist the centre in all its work. The assessment carried out by the Directorate of Extension Programmes for Secondary Education indicated that many teacher trainers and professors consider

the work of the extension services as a hindrance in the normal functioning of the institution.

Things are not very different at the elementary level. There are some institutions where attempts are made to coordinate the work of the extension services centres and the training institutions but usually it is argued that the work in a training institution for its regular members of staff is so full and so heavy that ordinarily it cannot take part in the work of the extension centre. The training institute staff, therefore, have a real difficulty which should not be explained away as unwillingness on the part of the principal and teachers of the institutes. Instead, efforts should be made to reconsider the strength position of these institutions. The strength should be so planned as to provide for active participation in extension work. At present the main responsibility of a training institute is to offer pre-service training to teachers. It does not consider it necessary to offer in-service education to those whom it trains and educates. This concept, therefore, has to change. The responsibility of a training institution should be not only to impart pre-service-but also in-service education. It is true of both the elementary as well as secondary institutions. There are very few institutions at present particularly at the elementary level, which carry out any research in the field of education. This may not be necessary for most elementary training institutions. But there should be a few which should carry some kind of research or at least action research at this level. The functions, therefore, of a good training institute should be to impart pre-service as well as in-service education and conduct some kind of research particularly action research. This will strengthen and stabilise extension services.

Built-in Extension Centre. This means that extension should become an integral part of a training institution and an extension centre should be built-in the structure of the institution. And whenever a new training institution is opened, the new concept should be kept in mind and provision made for an extension centre just as provision is made for any other pre-service requirement. In fact some States have already begun to do so both at the elementary as well as the secondary levels. Gujarat, Rajasthan and the West Bengal may be mentioned as examples.

Involving Teacher Organisations in Extension Work. The initiative in launching the programme of extension work was taken by the Ministry of Education, and a number of extension services centres were established in the country. An initiative from an external agency like the Ministry or the National Council of Educational Research & Training is perhaps necessary in a developing country like India. Extension work has proved its usefulness and its importance as an agency in imparting in-service education has been recognised by all educationists. It would perhaps be necessary for sometime to come to retain the initiative by the Central agencies. Gradually, however, the initiative needs to be taken over by the states, and in the states, by educational organisations, local bodies, school boards, teacher

organisations, subject organisations or arts and crafts organisations. All programmes initiated by an external agency, however good and useful, have an element of imposition in them. But if the initiative for conceiving, planning, executing extension work, comes from teachers or teacher organisations themselves, the element of imposition would be replaced by an element of willing acceptance of the programmes. This is particularly necessary at the elementary level, because it can hardly be possible for the Central Ministry or the State Governments to establish extension centres in all the training institutions.

Initiative in this respect has already been taken by some organisations. The Delhi Municipal Corporation has already established a Research and Extension Wing, the States of Gujarat, Rajasthan and Bengal and some others have started extension centres in their own areas. Some teacher organisations have also started the work. The movement needs to be strengthened and the State and Central governments need to sanction grants to the organisations for carrying out this work.

Developing Research Personnel. Extension is a new subject in the country. Very few persons are aware of its techniques. This is particularly so at the elementary level. The teacher training programme has been poor with the result that there is no or very little experimentation. Also there is a dearth of good practices developed by schools or other agencies. Then there is the difficulty of large numbers to be served. It cannot be possible for a centre or a State agency to guide and supervise the entire work of extension. There is, therefore, an urgent need to develop local talent which can be used as resource persons. In towns and cities, this is comparatively easy. There are usually many educational institutions and many persons in them who know their subject well and can be requested to help. But this is not so in remote cities and villages. There is a dearth of teachers and others who could be useful. It is not always possible to call persons from town for various reasons. The work in such areas is, therefore, difficult. Some thinking needs to be given to this difficult problem and ways and means found out to train up local people who can be used as resource persons for conducting workshops or for offering on the spot guidance. It may perhaps also be necessary and useful to prepare lists of resource persons locality-wise or district-wise.

Opening Centres in Inspector's Office. The present Primary Extension Services Centres have been attached to teacher training institutions and the State Institutes of Education. One of the objectives in doing so is to vitalise teacher training programmes in these institutions. It is said that the teaching programmes in our training institutions are removed from actual realities in schools. The training colleges are said to live in isolation of what is going on actually in schools. It is intended that the establishment of extension services centres in teacher training institutes would bring the training institute in close touch with the realities in schools, and enable them to adjust their programmes to suit school needs. Other advantages

to the institutions are that its teaching staff would be able to assist the centre in its programme as the institute has on its staff many specialists in various school subjects. It is also argued that training institute atmosphere is free from the authoritative influence of the school inspector or other officers of the Department and this therefore provides a suitable atmosphere under which teachers can feel free to speak out and discuss their difficulties and problems etc. In fact some argue that the absence of any administrative control with the extension services centre gives it the distinctive role of a helper and enabler. Some, however, feel that the main responsibility of improving schools rests with the officers and inspectors of the Department of Education. Therefore, the extension services centre should be located within the office of an inspector of schools or a deputy director of education. Under the existing circumstances, it has been observed that the decisions and suggestions offered by a workshop or a training course are not implemented because they do not come either from the inspector or the Department of Education. These disadvantages would cease to exist, if the extension services centre is attached to the office of the inspectors of schools or the deputy director of education. The disadvantage of such an arrangement may be that the dominating influence of the officers may prevail and the teachers may not be given any opportunity to think and speak and discuss their problems freely or to act or experiment as they would.

Opening Centres in Good Elementary or Post-Basic Schools. It is suggested in some quarters that extension services centres at the primary level should be located in good elementary or post-basic schools and that an attempt should be made to develop a close relationship between the primary, the post-basic, high or higher secondary schools on the one hand and teacher training institutes and the inspectors on the other.

Seminar Reading Programme for Primary School Teachers and Teacher Educators. The programme of Seminar Reading was introduced at the secondary level in 1962 with a view to stimulate teacher educators, inspectors and others concerned to develop initiative and introduce new methods and techniques. Under the programme, they are required to write an essay on important educational problems. These are laid down in consultation with educationists and each competitor is required to write on the subject he may choose from the list. The papers are read at a seminar. The programme is, therefore, called Seminar Reading. They are scrutinized at the extension centre at state and national levels. The first twenty are awarded cash awards of Rs. 500 each and a certificate of merit. This is a unique programme which restores to teachers prestige and confidence in their ability to tackle educational problems and express their opinion on them and thus contribute to the reconstruction of educational thought in the country. There is a need of a similar programme at the primary level. In fact, educationists of the calibre of Dr. V.K.R.V.

Rao have strongly advocated the introduction of a similar programme at this level too.

There are, however, inherent difficulties in introducing such a programme by a central agency. These difficulties are those of language, the large number of school teachers, teacher educators, and others, as well as those of finance and administration. The most suitable agency for doing so is the State Education Department or the State Institute of Education. There is danger, however, that the state level programme may not tend to be narrow. To avoid this and to give it a national character and outlook, a national body like the National Council of Educational Research & Training may introduce it and help it to develop in a way as would give it a national character. In fact the Department of Basic Education has already moved in this direction and it is likely that the programme may be accepted by the Council.

It is necessary to be clear about the purposes of the programme. These are :

1. To stimulate teachers and others to keep abreast of the latest techniques and developments in the field of elementary education.
2. To involve teachers and others in identifying and finding solutions to small and big problems in the field of elementary education.
3. To stimulate teachers and others to be receptive to new techniques and other ideas and enable them to introduce innovations, carry out experiments and adopt scientific methods to improve class-room practices.
4. To stimulate them to express themselves in English or the regional language or Hindi with regard to the innovations or experiments carried out by them personally or write on educational problems as they see them.

The selection of topics for preparing the paper is important. It is not advisable to prepare a list of topics in advance on which the competitors may write. It may, however, be useful if some principles are laid down for the selection of topics on which the papers might be invited. The principles can be as under :

1. To describe or write on an educational, experimental innovation, promotional project conducted by the writer himself or by a member of the staff.
2. To describe or write on an educational innovation carried out by a member in collaboration with any other member of the staff of the same institution or any other institutions.
3. To write on an educational problem at the elementary level as perceived by the writer.
4. To discuss an educational problem at the elementary level as perceived by the State or the nation as a whole.

5. To write on the class-room practices in vogue or as developed by the writer.
6. To carry out critical analysis of current educational problems at the State or the national level.

Developing a Philosophy of Extension in the Country. Extension in the country began as an adventure of faith. Its philosophy was implicit in its practices. However, like any developing subject it has been acquiring new dimensions, meanings and importance in the context of the professional needs and the fast developing body of knowledge. Any subject of study that claims our attention can do so, or at least can claim to do so, on the basis of a philosophy which is acceptable. Why do we accept extension as a useful service? What do we mean by it? How do we distinguish between various identical terms like in-service education, professional education and extension, adult education and extension? There is a need to know the principles on which extension should be based. There is a need to know the social and psychological factors that are involved or the relationship between social forces and extension. Extension is essentially a phenomena of change. It is necessary to know the factors involved in the process of change and the factors that facilitate change. What is the kind of organisation most suited to carry out and develop programmes of extension? What is the kind of relationship that is most suitable? What should be the approach to and nature of programmes? What are the comparative methods of extension in agriculture, medicine, etc.? These and many other questions need our attention. If extension is really useful, it should be possible to find out philosophical base for itself.

Training Extension Workers. Education extension is in its infancy. Not many know its techniques. There is a need to impart training to workers. Training courses of some kind are given to coordinators and honorary directors. But it has to be remembered that they are not the only persons who can or are supposed to offer services. Extension work involves the staff of the teacher training institution. It also involves outstanding teachers and educational leaders in the locality or the State, the inspectors and supervisors, officers of the school boards, members of the education committees of local bodies, education officers of higher rank, officers of the Education Department, subject specialists, educational administrators, and others. All these categories or people need to be trained or offered orientation courses. The needs of each of these categories are distinct. The training courses, therefore, for a coordinator would be different from that of an administrator, or that of an inspector of schools from that of a subject specialist.

The Coordinator—His Status and Training. The coordinator is the key person in an extension services centre. He is the person, who is mainly responsible for carrying out the work of the centre. He has to involve and get cooperation from members of the staff of the institution, headmasters, teachers, inspectors, officers of the

Department of Education, local educational leaders, subject specialists, and arts and crafts specialists. The coordinator should, therefore, be a man of high understanding, experience and resourcefulness. He should have tact to deal with all these categories of men and officers. His position should be immediately below that of the principal. His status, therefore, should be high. He should be able not only to earn respect, both on account of his long experience, better knowledge and status but also his position. This is not so at the present. His qualifications are the same as those of any other teacher educator and his position also is that of a teacher educator. In some quarters it is argued that extension is the concern of all in a training institution and therefore a separate position or a higher position for the coordinator becomes a hindrance in involving the rest of the staff as they consider the coordinator singly responsible for all extension work. This, however, is not a correct understanding of the position. The coordinator is mainly responsible for extension work; others help him in their special fields as part of their normal work. It would be unwise to presume that all members in a teachers institution can have the various qualities required of a coordinator. The training imparted to the coordinator today is not adequate. The duration of training is also short. It is not possible to impart either necessary information or the experience to enable him to function effectively. Extension is fast developing into a subject of study. The situation in which the coordinator has to work is not happy, as such the nature of teacher training programme at the elementary level is poor. These and other factors indicate that there is need to devote more time for training the coordinators. The period should be extended to at least three months. The coordinator's job is essentially of a practical nature. The training course, therefore, should consist of not only the academic discussions in the theory and practice but also of the work of practical nature.

The primary extension services centres are under the administrative control of the States. Occasionally, therefore, the coordinators are transferred and other teacher educators are posted in their stead. These new persons are not trained. Work in an extension centre consequently suffers. It is, therefore, essential that there are as few transfers of coordinators as possible. But transfers cannot be stopped. Therefore, it is necessary to adopt some method under which newly transferred coordinators receive some training and the extent of harm to the extension work is lessened. A suggestion in this regard is to adopt the practice of internship training for such coordinators. They may be requested to work with a senior and more experienced coordinator of some other centre for some time. Arrangements for regular training, however, may be made as early as possible.

Developing a Syllabus. The meaning and scope of extension is fast developing. But no effort has yet been made to develop a syllabus which would meet the needs of all kinds of extension workers. At present there is very little literature available on the subject.

A notional organisation like the NCERT may develop such a

It should be realised that the ultimate test of usefulness of the in-service programme will be the extent to which it has brought about better schools, richer and more varied opportunities for children to learn and grow, stronger and better-prepared teachers, more flexible school plant facilities, and improvements at every point along the way toward the achievement of the educational programme that is wanted and needed in this day and age.

The need for including a course in In-service Education has also been appreciated in the country. The Indian Association of Teacher Educators has drawn a model syllabus for the improvement of the M.Ed. programme. The syllabus provides a course in "In-service Education for Teacher Educators and Educational Administrators." It is hoped that the Indian universities will include this course in their post-graduate programmes of education. It should, however, be modified to suit specific needs of the State, where the University might be situated.

PART TWO

THE TRAINING OF SECONDARY TEACHERS

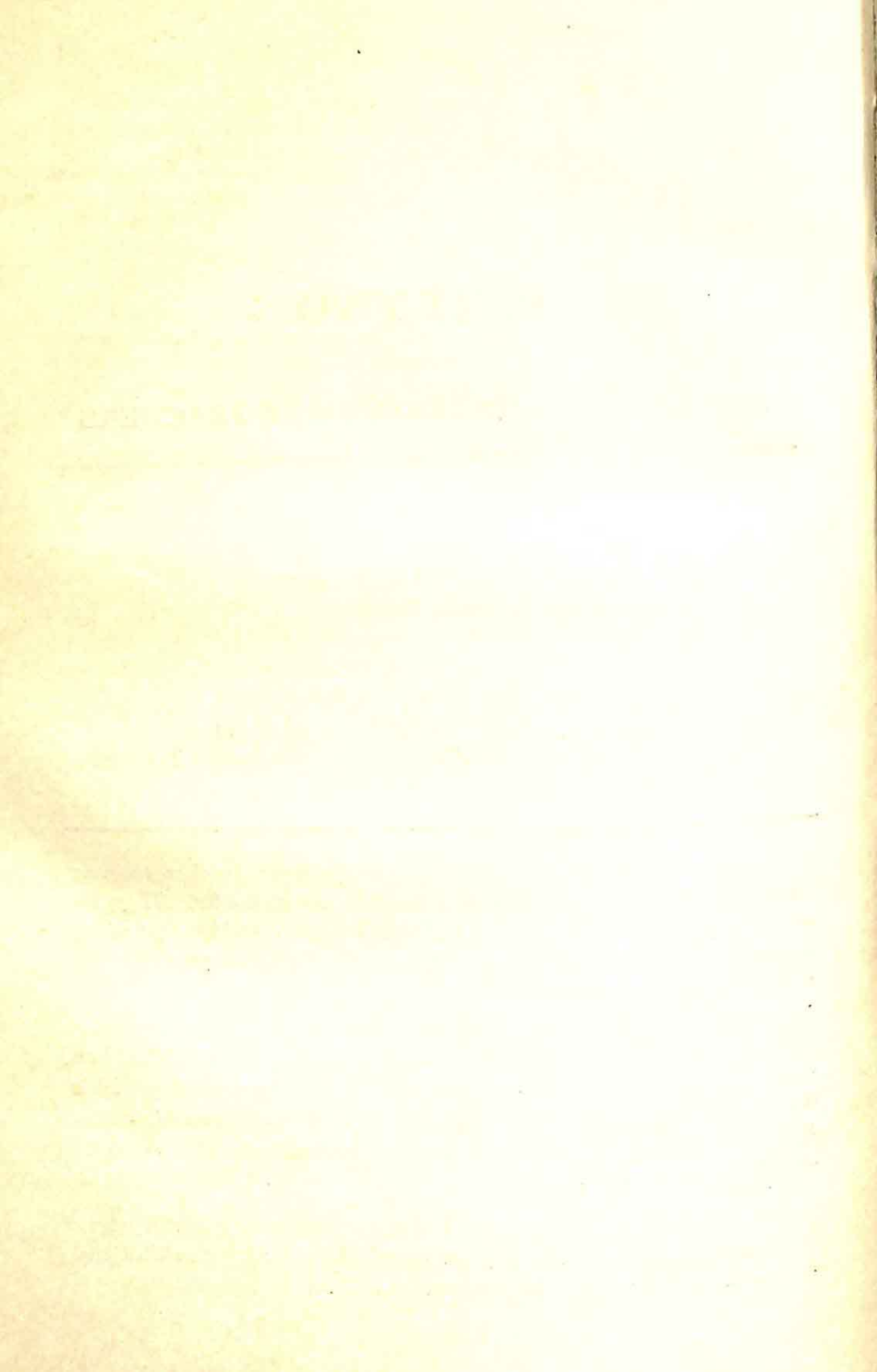
Chapter

7. The Training Institutions
 8. Post-Graduate Education and Research
 9. The One-Year Training Course
 10. B.Ed. Course through Correspondence
 11. Post-Graduate Diploma in Basic Education
 12. The Four-Year Degree Course in Education
 13. The Training of Teachers for Practical Streams
 14. The Training of Under-Graduate and Matriculate Teachers
 15. In-service Education
-

There are about three hundred post-graduate teacher training institutions, giving professional education to graduates. They receive a year's training for the B.Ed./B.T./L.T. and/or equivalent degrees. Qualified candidates require an additional year for the award of the M.Ed. degree.

Educational research, hitherto a neglected feature of Indian education, has now received due recognition in this country. It is financed by a number of agencies like the University Grants Commission, the National Council of Educational Research and Training, and the State Governments.

In-service education is also a regular feature of secondary teachers' colleges. Approximately one-third of the existing institutions have either an Extension Department or a Unit.



INTRODUCTION

The expansion of facilities for the professional education of secondary teachers is one of the biggest achievements of Indian education during recent years. As against 41 institutions training graduates in 1946-47 we have today as many as 275 post-graduate teacher education institutions.¹ The enrolment of these institutions has also gone up by almost ten times—3,262 (1947-48), 7,931 (1952-53), 17,226 (1957-58), 23,221 (1962-63), and 29,044 (1965-66). The percentage of trained teachers has also increased from 53.6 in 1949-50 to 70 in 1965-66. The relevant information is given in the following table :

TABLE 6

TEACHERS IN SECONDARY SCHOOLS BY PROFESSIONAL TRAINING,
1949-50 TO 1965-66

(in thousands)

Year	Total Number	Trained		Untrained	
		Number	Per cent	Number	Per cent
1949-50	116	62	53.6	54	46.4
1950-51	127	68	53.8	59	46.2
1951-52	140	77	55.0	63	45.0
1952-53	152	84	55.3	68	44.7
1953-54	165	94	57.2	71	44.8
1954-55	176	102	58.1	74	41.9
1955-56	190	113	59.7	77	40.3
1956-57	206	126	63.2	80	38.8
1957-58	222	139	62.8	83	37.2
1958-59	245	155	63.2	90	36.8
1959-60	267	170	63.7	97	36.3
1960-61	296	190	64.2	106	35.8
1961-62	330	212	64.3	118	35.7
1965-66	440	300	70	140	30.0

1. Department of Teacher Education. *Directory of Post-Graduate Teacher Education Institutions and Courses*. New Delhi. NCERT, 1966. P. ii.

Today (1965-66), there are as many as 2,34,100 graduate and 1,72,045 undergraduate teachers in high/higher secondary schools in the country. Of these, 69.6 per cent of the first category and 68.1 per cent of the second category are trained. This shows that approximately 31 per cent of teachers are untrained. It may be noted that in 11 out of 16 States, there is a considerable backlog of untrained teachers. This can be appreciated from the following statistics.

TABLE 7

NUMBER AND PERCENTAGE OF TRAINED TEACHERS AT THE SECONDARY STAGE IN DIFFERENT STATES (1965-66)

State	No. of Teachers	Percentage of Trained Teachers
1. Andhra Pradesh	34,215	80.5
2. Assam	9,210	18.6
3. Bihar	24,398	50.2
4. Gujarat	22,290	66.4
5. Jammu and Kashmir (a)	4,613	25.6
6. Kerala	22,031	89.0
7. Madhya Pradesh	19,700	69.0
8. Madras(c)	48,194(b)	86.3
9. Maharashtra	48,590	71.4
10. Mysore	10,334	59.5
11. Nagaland	309	15.9
12. Orissa	8,461(b)	52.0
13. Punjab	26,234(b)	96.0
14. Rajasthan	12,667(b)	60.0
15. Uttar Pradesh	33,311	81.9
16. West Bengal(d)	40,238	35.6

(a) Figures relate to 1961-62. Taken from memoranda of the State Government to the Education Commission.

(b) Figures are estimated.

(c) Figures relate to 1964-65.

(d) Figures relate to 1963-64.

It may be noted that the backlog of untrained teachers has been tackled satisfactorily in the States of Kerala, Madras and Panjab during the Second Plan period and has also been cleared in the States of Andhra Pradesh, Maharashtra and Uttar Pradesh by the end of the Third Plan.

The out-put of post-graduate teachers' colleges is also increasing considerably. This will be evident from their B.T./B.Ed. and M.Ed. candidates as shown in the following table :

TABLE 8

OUTPUT OF POST-GRADUATE TRAINING COLLEGES, 1950-51 TO 1961-62*

Year	B.T./B.Ed.			M.Ed.		
	Boys	Girls	Total	Boys	Girls	Total
1950-51	2,978	1,075	4,053	145	59	204
1955-56	7,499	2,865	10,364	193	121	314
1960-61	12,267	5,477	17,844	359	169	528
1961-62	13,711	6,764	20,415	385	133	518

*Education Commission. *All India Educational Statistics*. 1966. Pp. 135-136.

TYPES OF TRAINING PROGRAMMES

Secondary teachers of this country are either graduates or undergraduates. After receiving a year's training, the graduates are awarded the B.Ed./B.T./L.T. degree. If trained in a basic training college, they receive the Post-graduate Diploma in Basic Education.

For training teachers for multipurpose high schools, four regional colleges have been established in the country. These have been set up at Ajmer, Bhopal, Bhubaneswar and Mysore. In addition to one-year course for the graduates, they also provide a four-year integrated course in teacher education to Higher Secondary Certificate (Pass) candidates. The Kurukshetra University also offers a four-year programme in teacher education. But the Matric (Pass) is the minimum qualification for admission to this course.

A recent experiment is the introduction of the B.Ed. course through correspondence. The candidates study the Theory Part of the programme through correspondence, and they have to attend two summer schools for practical and field-work. The main purpose

of introducing this course is to clear the backlog of untrained teachers. The project has been concentrated at five centres, *viz.*, the Central Institute of Education, and the four regional colleges. While the former serves the need of the Union Territory of Delhi, the regional colleges cater to their respective regional needs.

After the successful completion of the one-year post-graduate course or the four-year degree course in teacher education, a candidate studies for the Master's degree in Education. This is of a year's duration in practically all the universities except Calcutta and Gauhati. These two universities conduct the M.A./M.Sc. course in Education, which is of two years for arts/science graduates.

A recent innovation is the introduction of the post-graduate diploma in some of the branches like Educational Administration, Guidance and Counselling, Educational Measurement and Evaluation, Linguistics and Science Education. These diplomas are of a year's duration and are conducted by a few universities or institutions.

A number of universities now offer the Ph.D. course in Education. M.Eds. are admitted to this programme, and the candidates have to conduct investigations of an advanced and original type. The minimum duration for completing the course is two years.

The teachers for the middle or junior secondary schools are generally under-graduates (matriculates or intermediates). They are trained in secondary training schools/colleges. The duration of the course is one or two years, and the successful trainees are awarded a certificate or a diploma either by a university or the State Department of Education.

TYPES OF INSTITUTIONS

The existing post-graduate teacher education institutions are of various types. Some are university departments or colleges of education, some are independent colleges of education, and some are departments of education with the arts and science colleges. Some of these are affiliated to universities and some of them are not. The relevant information is given in the following table :

TABLE 9

TYPES OF INSTITUTIONS OFFERING POST-GRADUATE TEACHER EDUCATION COURSES

State	Number of University Departments and University Colleges of Education	Number of Institutions affiliated to Universities		Number of Institutions not affiliated to Universities		Total
		Independent Colleges of Education	Department attached to Art/Science Colleges	Independent Colleges of Education	Department attached to Arts/Science Colleges	
Andhra Pradesh	1	6	2	...	...	9
Assam	2	4	1	...	...	7
Bihar	2	5	...	...	...	7
Gujarat	4	7	3	3	...	17
Jammu and Kashmir	1	2	...	...	...	3
Kerala	1	18	1	2	...	22
Madhya Pradesh	...	13	2	...	...	15
Madras	1	17	1	...	...	19
Maharashtra	3	23	1	...	...	27
Mysore	2	16	...	2	...	20
Orissa	...	4	...	...	...	4
Punjab	3	22	...	...	...	25
Rajasthan	...	11	...	...	...	11
Uttar Pradesh	6	37	5	6	2	56
West Bengal	4	10	10	1	1	26
Union Territories	1	4	1	1	...	7
Total	31	199	27	15	3	275

*Department of Teacher Education. *Directory of Post-Graduate Teacher Education Institutions and Course.* New Delhi, NCERT. 1966.

In short, out of the existing 275 institutions, 11.2 per cent are university departments or colleges of education, 78 per cent are independent colleges of education, and 10.9 per cent are departments of education with arts and science colleges. Eighteen of these institutions are not affiliated to universities.

A further analysis shows that the majority of these institutions are co-educational. As many as 217 of them belong to this category, but while 39 restrict admission to women as few as ten to men.¹

The in-take capacity of these institutions also varies. Approximately one-third of them have a student enrolment between 51 and 100, another one-third have an enrolment between 101 and 150, and hardly one-fifth enrol more than 150 students. The following statistics give the relevant information :

TABLE 10

INTAKE CAPACITY OF POST-GRADUATE TRAINING COLLEGES, 1965-66

In-take capacity	No. of Institutions	Percentage to Total No. of institutions
1—50	26	10.9
51—100	83	34.7
101—150	81	33.5
151 and above	50	20.9
Total	240	100.0 ¹

It may be noted that where the course is of one year's duration, the average intake capacity of a post-graduate training college is about one hundred. The following seven States have, however, an intake capacity of hundred or less :

TABLE 11

WITH LESS THAN ONE HUNDRED INTAKE CAPACITY OF A
TEACHERS' COLLEGE

State	Average Intake Capacity
Assam	94
Gujarat	93
Jammu and Kashmir	98
Madras	76
Mysore	63
Orissa	93
Uttar Pradesh	96

1. *Directory of Post-Graduate Teacher Education Institutions and Courses.*
p. 307.

The highest average strength is 200 and that is in the States of Bihar, Madhya Pradesh and West Bengal. It is also discouraging to find that a number of training colleges have not sufficient strength. A sample study of 50 training colleges covered by the COOP Team indicated that 49 per cent of these colleges did not have sufficient strength equal to their admission capacity.¹

Originally the secondary training colleges of India prepared candidates for the B.Ed. or B.T. degree only, and still the majority or 142 institutions conduct this programme only. But a large number of institutions have now organised their own post-graduate departments, and they conduct the M.Ed. course in addition to the B.Ed. programme. The number of such institutions is 144. A few of them run specialised courses too, *e.g.*, English Teachers' Diploma, Diploma in Educational Administration, Diploma in Examination and Evaluation, Language Teachers' Certificate, Diploma in Guidance and Counselling. Some institutions, however, conduct courses leading to the Post-graduate Diploma in Basic Education. There are only nine such institutions. Five colleges offer a four-year integrated course in teacher education. It may also be noted that five University Departments of Education, *viz.*, Kerala, Gujarat, Allahabad, Panjab, and Jammu and Kashmir, are preparing candidates for the M.Ed. and Doctoral degrees only. They are not running the B.Ed. course.

The number of post-graduate training colleges offering courses for undergraduate teachers is not many. There are two such institutions in Gujarat, one in the Madhya Pradesh and five in the Maharashtra. They offer the T.D. Diploma or Dip. T. course for middle school teachers. Seven teachers' college in the Punjab run the J.B.T. course for elementary teachers. And hardly two conduct the Diploma Course in Early Childhood or Nursery School Education in the entire country.

CONTROL

Training of secondary teachers is controlled by four bodies—the State Department of Education, the University, the Management, and the Government of India. Of these, the first two bodies exercise the major control.

The State Department of Education

Education is a State subject in the country, and the State Government plays a very significant role in the training of teachers. It outlines the general policy, decides what financial assistance can be given to the trainees, awards grants-in-aid to private institutions, and draws the details of those programmes where the university is not concerned. It also conducts the post-graduate diploma courses in

1. Committee on Plan Projects. *Report on Teacher Training*. New Delhi, Government of India, 1964.

basic and physical education. In addition, the State Governments run a few institutions of their own.¹

The major responsibility of the State Government is the planning and execution of programmes, the number and types of teachers needed for various branches of education and how they can be trained. It has to see further how a standard can be maintained and that the universities turn out the different types of teachers needed for the State. Finally, it has to coordinate the various types of teacher education programmes at different levels. Unfortunately, there is no suitable machinery for achieving this end in any State as yet.

The Universities

The majority of post-graduate teacher institutions are affiliated to the universities.² In fact, it is the responsibility of the universities to train graduate teachers except in the Uttar Pradesh, where the State Department of Education awards the L.T. diploma as equivalent to the B.T./B.Ed. programme. Out of fifty teacher training institutions in that State, eleven prepare their students for this examination.³

The award of a university degree or diploma entitles a person to receive a job in the school system, and the State Department of Education does not lay down any additional conditions like the certification for teaching as is customary in a number of States in the U.S.A.

On the suggestions of the Calcutta University Commission, a number of universities have set up their own departments/colleges of teacher education. As many as 31 universities have such departments or colleges. All of them conduct the B.Ed., M.Ed., and doctoral programmes, except the five university departments which do not run the B.Ed. course. Their names have already been mentioned.

With the exception of Roorkee, Jadavpur, Darbhanga, Khairagah and the agricultural universities, all the universities of this country provide for different programmes of teacher education. The Indore University has yet to start its courses in pedagogy. The Jadavpur University has neither a teacher training course nor a Department of Education. It, however, runs evening post-graduate courses for school teachers.

The academic control over teacher education in a university vests in the faculty and board/committee of courses of studies. At the early stages, none of the Indian universities had provided for an

1. *Infra* p. 138. 2. *Supra* p. 134.

3. Government of Uttar Pradesh. *Educational Development in Uttar Pradesh*. 1965. P. 18.

independent faculty of education and the faculty of arts used to consider the proposals of the boards of studies in education.

But a lead was given by the University of Mysore which instituted a Faculty of Education. A number of universities followed suit. And today twenty-nine universities have their faculties of education. These universities are : Annamalai, Bangalore, Baroda, Bhagalpur, Bihar, Calcutta, Delhi, Jabalpur, Jamia-Millia, Jivaji University, Karnatak, Kurukshetra, Marathwada, Nagpur, North Bengal, Osmania, Patna, Punjab, Punjabi, Rajasthan, Ravi Shankar Visvavidyalaya, Sardar Vallabhbhai Vidyapeeth, Shivaji University, Udaipur, Utkal, Venkateswara, and the Vikram University. In the remaining universities, the old tradition still lingers on. The Faculty of Arts still passes judgment over the deliberations of the board of studies in education. It is interesting to note that while the Baroda University has a Faculty of Education and Psychology, the Annamalai University has a Faculty of Education and Philosophy.

The size of the Faculty varies from university to university—from nine members in the Kurukshetra University to 96 in the Panjab, the average strength being 15. The procedure of electing or assigning members to the Faculty also differs. In some universities, it is the Syndicate which nominates such member, in others, the members of the Senate indicate their preference for the Faculty to which they would like to be assigned ; in a number of universities, the members are either *ex-officio* or elected ; and in many, there is a combination of all the procedures.

With the exception of four universities, every university in this country has a single board or committee of courses of studies. The exceptions are : Calcutta, Gorakhpur, Punjab and Vikram universities. Both Calcutta and Gorakhpur have two boards of studies—one for under-graduates and the other for post-graduates. The Punjab University has three boards, *viz.*, (a) Board of Studies in Teaching ; (b) Board of Studies in Basic Education; and (c) Joint Board of Studies of (a) and (b). The Vikram University has an independent board of studies for each of the following branches : (1) Philosophy and Sociology of Education ; (2) Advanced Psychology ; (3) Comparative Education ; and (4) Educational Administration and Teacher Education. The Udaipur University is also contemplating to set up independent boards of studies for following branches : (1) Philosophy, Sociology and History of Education ; (2) Curriculum, Methods and Evaluation, Health and Hygiene ; and (3) Psychology, Guidance and Physical Education.

The size of the board of studies varies according to universities—from six members in the Bangalore University to twenty-six in the Gujarat University, the average strength being twelve. While some of the members are *ex-officio*, a few are elected and others are nomi-

nated by the Syndicate. Some of the universities include a few outside experts as members.

The Management

Types.—The post-graduate teacher training institutions are managed by three different types of bodies—Universities, Government, and private or autonomous bodies (aided and unaided). The relevant information is given in the following table :

TABLE 12

TYPES OF POST-GRADUATE TEACHER EDUCATION INSTITUTIONS ACCORDING TO THEIR MANAGEMENT

State	Number of Institutions managed by universities			Number of institutions run by Government			Number of institutions managed by private bodies and autonomous bodies			Total
	M	W	Co	M	W	Co	M	W	Co	
Andhra Pradesh	1	...	...	5	1	1	1	9
Assam	2	...	...	2	...	1	2	7
Bihar	1	1	...	...	...	5	...	...	...	7
Gujarat	...	1	3	...	...	3	1	1	8	17
Jammu and Kashmir	1	...	...	2	...	...	...	3
Kerala	1	...	...	5	1	2	13	22
Madhya Pradesh	1	...	11	...	1	2	15
Madras	1	3	2	2	3	4	4	19
Maharashtra	...	2	1	...	1	6	...	1	16	27
Mysore	2	...	...	7	...	1	10	20
Orissa	3	...	...	1	4
Panjab	3	...	...	7	...	3	12	25
Rajasthan	2	2	1	6	11
Uttar Pradesh	6	2	1	1	2	6	38	56
West Bengal	...	1	3	1	1	6	1	6	7	26
Union Territories	1	...	...	4	...	1	1	7
Total	1	5	25	7	5	71	11	29	121	275

*Department of Teacher Education. *Directory of Post-graduate Teacher Education Institution and Courses*. NCERT, 1966. Appendix V.

The above analysis shows that 11.2 per cent of the institutions are managed by universities, 30.2 per cent are run by the Government, and that 58.6 per cent are under private management. Thus 70 per cent of the institutions are under non-government bodies. It may also be noted that private enterprise is more or less non-existent in some of the States like Andhra Pradesh, Assam, Bihar, Madhya Pradesh, and Jammu and Kashmir.

University.—A university department/college is a constituent unit of its own university. It is the direct responsibility of the university to see that its unit runs efficiently and serves as a model to others. It is the general practice of a university to appoint a board of visitors, which makes a periodical inspection of its college/department of education. The board makes suggestion for its improvement and expansion.

But the major responsibility of a university is to maintain a certain level of efficiency in its affiliated colleges/departments of education. For this purpose, a university draws rules and regulations for every institution seeking university recognition. It has to comply with the prescribed conditions. Formerly, these were uniform and were applicable to any branch of learning—arts, science, commerce or education. There were no specific regulations for a particular discipline. But now the regulations differ according to the nature of the instructional programme that an institution may like to impart. Under the circumstances, the affiliation rules for a teachers' college/department have a distinctive feature of its own. For illustrating this, the minimum requirements fixed by the Rajasthan University for granting affiliation to a teachers training college seeking affiliation for a unit of 100 students for the B.Ed. and to 10 to 15 students for the M.Ed. are given below.

A. Courses of Study

(1) *Every Teachers' Training College* should provide courses for Theory Papers and Practical work.

(2) *Every Teachers' Training College* should provide for training in all the School Subjects as stated under the paper on 'Principles and Methods of Teaching School students' in the relevant Ordinances and Regulations. Besides, every college should also provide at least three out of the following as special subjects for Specialisation :—

- (i) Educational and Vocational Guidance.
- (ii) Audio Visual Education.
- (iii) Evaluation and Measurement.
- (iv) Physical Education.
- (v) Social Education.
- (vi) Basic Education (in non-basic training colleges).
- (vii) School Library Organisation.
- (viii) Education of Exceptional Children.
- (ix) Rural Education.
- (x) Developmental Psychology.
- (xi) Pre-School Education.
- (xii) Crafts.

(3) Every training college offering 'Methods of Teaching Science' should have a good *Science Laboratory* so equipped so as to enable the trainees to conduct experiments required in the Higher Secondary School Syllabus and to prepare for demonstration lessons.

B. Staff (duly qualified in accordance with the minimum qualifications laid down by the University) :

(i) Principal	1	
(ii) Professors	2	(The number could be reduced to 2, if there be no M. Ed. unit).
(iii) Lecturers	3	(The number could be reduced to 2, if there be no M. Ed. unit).

In addition to the above, there should be instructors in Physical Education, Arts and Crafts.

The ratio between the trainees and the teaching staff should be 10 : 1, exclusive of the principal and lecturers in Craft, Physical Education with the added emphasis on practical work in training, and the above ratio should be treated as an irreducible minimum.

N. B.—It is desirable to keep the M.Ed. Unit small and at any rate not larger than 15 students so that high quality of work may be maintained.

C. Accommodation

- (i) A Multipurpose Assembly Hall 2,400 sq. ft.
- (ii) Subject rooms and tutorial rooms (10).
- (iii) Psychology laboratory 600 sq. ft.
- (iv) Science laboratory 1,000 sq. ft.
- (v) Workshop 400 sq. ft.
- (vi) Arts Rooms 400 sq. ft.
- (vii) One staff room. This excludes the Principal's room.
- (viii) Common rooms for students. Separate accommodation be provided for men and women students. The Floor space will depend upon the number of students in each category.
- (xi) Library 1,200 sq. ft. Includes provision of two small rooms for record and storage. An additional 300 sq. ft. may be required in an M.Ed. College.
- (x) Adequate playgrounds to provide facilities in games and sports.
- (xi) Hostel accommodation at least for 50 per cent students of the total strength.

D. Equipment

- (i) Psychological laboratory.
- (ii) Science laboratory.
- (iii) Arts and Crafts Department.
- (iv) Audio-visual aids Departments.
- (v) Games and Sports.

In deciding the basic/equipment, the following criteria should be kept in mind :—

1. The equipment should have a direct relevance to the objectives of teacher education.
2. The equipment should be of such a nature as to assist the teacher trainees in improvising apparatus of their own.
3. The requirements of local conditions and the needs of local schools should also be taken into account.
4. Special attention should be given to provide necessary audio-visual aids.
5. Sufficient contingent expenditure should be permitted in order to enable trainees to prepare improvised and other teaching aids.
6. The provision of about 5 to 10 per cent of the non-recurring expenditure should be made available towards the proper maintenance of equipment and the cost of accessories and spare parts.

A suggestive list of requirements is given in the table below :—

Item	Approximate cost of equipment (non-recurring)	Recurring annual cost towards maintenance
1. Psychological Lab.	5,000	500
2. Science Lab.	8,000	1,000
3. Arts and Crafts Deptt.	5,000	1,000
4. Audio-Visual Aids	8,000	500
5. Games and Sports	1,000	500

E. Library

The library should contain up-to-date reference books, and subscribe to an adequate number of educational journals. The college

should also make arrangements to obtain all available literature on education techniques from Research Bureaus, Employment Organisation, Educational and Vocational Guidance Bureaus, etc. It is, therefore, suggested that a college which offers B.Ed. should have at least 3,000 *titles* covering the various subjects and not less than four copies of the more frequently used books. The number of copies will of course depend upon the frequency of use and reference. About Rs. 10,000 is considered the minimum for providing an initial nucleus of a modest, but well-equipped library.

The college which offers M.Ed. will require an additional **500 standard titles**. A recurring expenditure of Rs. 5,000 should be permitted on the purchase of books and subscription of educational journals for B.Ed. The amount towards journals may be enhanced in the case of M.Ed. courses by Rs. 500.

F. Experimental School

It is absolutely essential to have an experimental high/higher secondary school attached to every training college. The school should be under the academic administrative and financial control of the principal of the college. The school should also be treated as an educational laboratory by the staff and trainees for trying out new ideas and conducting experiments. It would also serve as useful aid in organising demonstration and criticism lessons. It would also provide opportunities to the college faculty to keep themselves in touch with current problems in school teaching and administration and to obtain first-hand experience in their respective fields. The experimental school should preferably have at least two sections in each class so as to facilitate experiments where experimental and controlled group are necessary.

The State Government

As many as 71 post-graduate teachers colleges are run by Government. The institutions are entirely financed by the Government, and the employees are State servants. The Government is also responsible for accommodation, library and other facilities for running these colleges on proper lines.

All institutions, not seeking university recognition, are fully under government control. But affiliated colleges/departments have to comply with university regulations for securing and for the continuance of recognition. It is, however, found that university recognition is at times loosely given to government institutions.

Private Management

The bulk of the institutions are under private management. They are controlled by two external agencies—the Government and the University.

The institutions depend on Government for financial aids, and as such they have to comply with the grant-in-aid rules fixed by the Government for this purpose.¹ The accounts are audited. At times the D.P.I. visits the institutions. The practice, however, varies according to States. In some of the States, the teachers' colleges are under the Director of School Education and in others under the Director of Collegiate Education. There is no uniformity of practice.

The University controls the institutions through its rules of granting recognition. It alone entitles them to send their candidates for university examinations.

The Government of India

The Government of India is not charged by the Constitution with any direct responsibility for teacher education, though it runs a few institutions. It bears at present the major expenditure for in-service education schemes for teachers, teacher educators and administrators, and gives financial assistance to teachers and institutions for research and publications. The Ministry of Education has, however, felt moral responsibility—like other Central Ministries—for giving national leadership in the field and for coordinating the programmes of the States.

There are three principal agencies, which work on behalf of the Ministry of Education for the improvement of the teacher education. The Education Division of the Planning Commission draws plans for the improvement and development of education for the entire country, teacher education being one of the major aspects. In 1963, the Committee on Plan Projects of the Planning Commission had set up a study team for selected educational schemes. The Study Team made a pilot survey of some of the existing teacher education institutions, and submitted a very valuable report making suggestions for the improvement of teacher education in this country.²

The National Council of Educational Research and Training is the professional and academic wing of the Ministry of Education. It lays a special stress on the improvement of teacher education through pre-service and in-service education programmes, publications and research.

And last but not least is the University Grants Commission, which is giving financial aids to a number of universities for developing their post-graduate programmes of education. It has set up the Centre for Advanced Studies in Education in the Maharaja Sayajirao University of Baroda. It also appointed a Review Committee on

1. *Supra.* p. 135.

2. Committee on Plan Projects. *Report on Teacher Education.* New Delhi, Government of India. 1964. Pp. 206.

Education for examining the standards of teaching and research in departments of Education in Indian universities and to make recommendations in regard to the manner in which adequate standards could be maintained by them. The report of the Committee has just been released.¹

Like any other State Government, the Government of India also runs a number of teacher training institutions in the Union Territories, the most important being the Central Institute of Education, Delhi.

FINANCE

A study of the expenditure on teacher education in different States reveals that this branch of education has not received the amount of attention it deserves. There are varying degrees of expenditure in different States and even within the same State, there is a good deal of variation in the different institutions doing the same type of work. The following statistics will show the range of expenditure on training colleges in India in different States during 1959-60 :—

TABLE 13

DIRECT EXPENDITURE ON TEACHERS' TRAINING COLLEGES BY STATES, 1959-60*

(in rupees)

States	For Men	For Women	Average Annual cost per pupil
	Rs.	Rs.	Rs.
Andhra Pradesh	6,76,245	1,12,018	849.4
Assam	1,88,525		1,984.4
Bihar	2,92,146	40,340	491.8
Bombay (Maharashtra and Gujarat)	13,91,017	1,36,856	359.4
	3,97,878		497.3
Jammu and Kashmir	2,38,371	...	1,010.0
Kerala	5,18,875	68,916	387.5
Madhya Pradesh	30,81,626	2,13,459	767.8
Madras	25,59,474	11,61,893	207.5
Mysore	12,60,608	2,28,343	353.4
Orissa	2,76,061	7,273	359.6
Punjab	11,33,969	2,40,022	400.2
Rajasthan	5,28,918	...	886.0
Uttar Pradesh	10,42,510	3,89,777	886.3
West Bengal	8,05,174	3,38,651	703.9
Delhi	3,86,856	...	299.9
Himachal Pd.	57,873	...	1,091.9
Tripura	79,016	...	745.4
Pondicherry	29,245	...	359.2

* Ministry of Education. *Education in India*. Vol. I. Manager of Publications, 1963. P. 193.

1. U. G. C. *Report of the Review Committee on Education*. Delhi, Manager of Publications, 1966, P. 94.

The per capita expenditure is, however, gradually rising—Rs. 331.8 (1950-51), Rs. 583.0 (1955-56), Rs. 424.1 (1960-61), and Rs. 800 (1965-66). The proportion of expenditure on training colleges managed by different agencies was : government colleges 70.0 per cent, private aided colleges 28.4 per cent, and private unaided colleges 1.6 per cent. The distribution of expenditure from different sources during 1958-59 and 1959-60 is given in the table below :

TABLE 14

DIRECT EXPENDITURE ON TEACHERS' TRAINING COLLEGES BY SOURCES

Sources	1958-59		1959-60	
	Amount	Percentage	Amount	Percentage
	Rs.	Rs.	Rs.	Rs.
Government Funds	90,37,257	75.9	1,35,80,599	75.9
Local Board Funds	...	...	2,623	0.0
Fees	17,64,875	14.8	22,95,248	12.8
Endowments	4,63,296	3.9	10,11,974	5.7
Other Sources	6,46,442	5.4	9,91,491	5.6
Total	1,19,11,870	100.0	1,78,81,935	100.0

It will be seen that (a) nearly three-fourths of the expenditure was met by government, about one-seventh from fees and one-ninth from other sources, the contribution of local boards being insignificant. (b) In comparison to the figures for 1958-59, the expenditure in 1959-60 increased by 50.3 per cent from government funds, by 30.8 per cent from fees and by 80.5 per cent from other sources.

It has already been pointed out that in addition to the university institutions, 58.6 per cent of the teachers' colleges/departments are managed by private or autonomous bodies. These institutions get government grants and every State Government has framed its own regulations for the purpose. In Andhra Pradesh, the Government have decided that all the aided colleges in the State will be given a teaching grant equal to 100 per cent expenditure on salaries of teaching and non-teaching staff minus fees at standard rates. The total amount of grant-in-aid is limited to the actual deficit and is further subject to the condition. In Assam, grants are sanctioned on *ad hoc* basis at a fixed rate on consideration of each case individually. The Government of Gujarat sanctions 50 per cent grant-in-aid on admissi-

ble expenditure. Kerala awards a grant at the rate of Rs. 70 per student per year.

The Madhya Pradesh has adopted a uniform policy of grant-in-aid to all types of private institutions except Anglo-Indian schools. The grant-in-aid is assessed as equal to 75 per cent of the admissible expenditure or the net deficit, whichever is less. In defining admissible expenditure, detailed conditions have been laid down. From 1966-67 onwards, the private teachers colleges of Maharashtra get 66.6 per cent of the approved expenditure as grant-in-aid. The Government of Mysore awards 50 per cent of net expenditure on maintenance and an equal percentage on the expenditure on equipment and building.

There are no special provisions for grant-in-aid to private teachers' colleges in the Punjab. They are, however, governed by rules prescribed for arts colleges. The grants are made on *pro rata* basis on the deficit accruing from salary paid to the staff members and the income from tuition fees. Women's colleges and institutions in rural areas are, however, entitled to Rs. 3,000 in addition to the normal grants provided they have been affiliated for not less than two years.

Rajasthan has not adopted a uniform policy regarding grants-in-aid to private teachers' colleges. Some institutions get 75 per cent of approved expenditure as grant, some even to the extent of 90 per cent, and a few newly established colleges do not receive any financial aids. In awarding grants, attention is paid to (1) university results, (2) attendance, (3) staff qualifications and (4) other requirements as laid down by the Department from time to time.

The U. P. Government gives grants to those colleges only which have a standing of 15 to 20 years. The number of such institutions is hardly nine. In West Bengal, the Government releases grants-in-aid in favour of deputed teachers at the rate of their pay and the allowances, to which they are entitled in their respective schools. In addition to this, the expenditure of sponsored colleges are met by the Government. The private colleges at times get *ad hoc* grants in respect of furniture, grants, etc.

There are no private teachers' colleges in Bihar, Jammu and Kashmir and Orissa, and the Union territories. Hence the question of awarding grants does not arise.

TEACHERS

The majority of post-graduate teacher education institutions are affiliated to universities. The qualifications and scales of salary for the teachers of these institutions are laid down by the universities. These teachers are of three cadres, *viz.*, teachers, readers and assistant professors, and principals. The universities are trying to enforce the

U.G.C. grades for their own employees as well as for teachers of affiliated universities. The qualifications prescribed for teachers vary according to universities, as every university has its own standards. But the qualifications of the teaching staff are not up to mark. This will be evident from the following extract :

The staff of these universities is inadequately prepared for its task. A study has revealed that 40 per cent of the staff in these universities have only a B.A. degree in addition to the B.Com., 88 per cent hold a Master's degree in education or in an academic subject, and only 2 per cent have a doctor's degree.¹

The State Departments of Education have also fixed the minimum qualifications and pay scales for the teaching staff of training colleges. The details are given in the Appendix.

The universities have also prescribed the teacher-pupil ratio for the teachers' colleges. The proportion varies, and the university conditions are also relaxed. The following is the teacher-pupil ratio in the existing teachers' colleges of this country—127 with the population of 1 : 10 and below, 78 with 1 : 11—15, 31 with 1 : 16—20, and 8 with 1 : 21 and above.

STUDENTS

The minimum qualification prescribed for admission to a post-graduate training college is the first university degree. But the large majority of entrants to the training colleges are those who are drawn to the profession as the last resort. Among these are some who have just missed admission to other studies/post-graduate university courses. There are others who have passed their qualifying examination only after the second or third attempt. The majority of them are 3rd division graduates. Several studies have been made analysing the qualifications of student teachers of teachers' colleges. A study of qualifications of students of training colleges in the district of Allahabad and neighbourhood (offered in part fulfilment of the requirements of the M.Ed. examination of Allahabad University) reports :

The academic attainments of male students teachers are poor ; nearly three-fourths of them are third class graduates... The teaching profession does not seem to attract science and commerce graduates. Practically all the teachers under training are graduates and post-graduates in arts subjects.

In another study of the quality of entrants to the B.Ed. class reported by the Principal, Training College Phagwara (Punjab), the following percentages of 1st, 2nd and 3rd classes have been found :

1. Government of India. *Education's Commission's Report*, Delhi, Manager of Publications, 1966. P. 77.

TABLE 15

QUALITY OF ENTRANTS TO THE B.ED. CLASS

Degree	I Class	II Class	III Class
M.A.	0.0	2.0	6.0
M.Sc.	0.0	0.0	0.0
B.A.	0.7	8.3	62.8
B.Sc.	0.0	3.2	Not mentioned

Another recent study made by a training college in Maharashtra reveals that—

- (1) During the last four years, not a single M.Sc. was enrolled in the institution ;
- (2) Out of 266 trainees, only six were M.A.'s of whom only one was in Second Class; and
- (3) about 210 graduates were in the Pass Class.¹

It is also found that subject-knowledge of the trainees is not up to the mark. Many of them try to specialise in those subjects, which they might not have studied at the college stage. Some of them might have offered such subjects at the degree level which have no relevance to the school, and the third class graduates are poor in subject-matter.

With the high rate of educational unemployment, it is felt that if the remuneration, prospects of promotion and conditions of service of teachers could be made really attractive, a large proportion of suitably qualified candidates would enter the profession except perhaps in subjects where facilities for obtaining higher education are strictly limited.

The training in a teachers' college is also quite expensive. On an average, a trainee has to spend Rs. 1,500 to Rs. 2,000 for a period of ten months. He may not receive a stipend, and may have to pay a heavy tuition fee. A study of 237 post-graduate teachers colleges shows that while 63 of them do not charge tuition fees, others charge tuition fees at different rates per annum—9 (Rs. 50—100), 90 (Rs. 101—200) and 75 (Rs. 201—and above).

1. *Baroda Report*, pp. 5-6.

At the same time, very few colleges offer stipend to trainees. It is found that out of 275 institutions hardly 80 colleges offer stipends—70 (Rs. 20—50) p.m., 9 (Rs. 51—100) p.m. and only one Rs. 200 p.m. It may, however, be noted that some of the States depute their own employees to training colleges on full or partial salaries.

SOME OTHER ASPECTS

The majority of training colleges of this country is suffering from a lack of laboratory facilities, and teaching aids and equipment. A survey of 244 institutions reveals that 68 of them are housed in rented buildings, only 37 have their own science laboratories, and 144 have their own demonstration schools. It further reveals how inadequate are their library facilities. The following statistics will be found interesting :

TABLE 16
POST-GRADUATE TRAINING COLLEGES AND THEIR LIBRARIES

Volumes in the Library	No. of Institutions
1,000 and above	32
1,000—2,000	42
2,000—5,000	71
5,000—10,000	59
10,000—15,000	14
15,000—and above	15
Data not available	11
Total	244

It is also depressing to note that the majority of institutions do not have workshops, craftsheds or art rooms. Hardly a few of them have developed audio-visual laboratories.

Another great handicap is the shortage of professional literature appropriate for teachers and teacher educators. Suitable books in Indian languages are yet to be written ; those which have been published have borrowed western ideas unsuitable to this country. Books written in foreign languages have not been written from Indian point of view.

There has, however, been a considerable development in the in-service education of teachers. This is mainly due to the organization of the Extension Services Departments/Units. These have been

attached to selected institutions, their number being 102 at present. A fuller account of this programme has been given elsewhere in this book.¹

SPECIAL PROBLEMS

There has thus been a considerable expansion in the facilities provided for training secondary teachers in this country. The number of institutions with enrolment has increased, new programmes are on the anvil, post-graduate teaching and research has developed, and in-service education is now widespread.

In spite of this development, the situation is not very happy. The quality of instruction has deteriorated, the average capacity of an institution is less than one hundred, and a large number of institutions do not have sufficient strength equal to their admission capacity. Lack of library and laboratory facilities, teaching aids and equipment is another big handicap. The majority of the institutions have insufficient or improper accommodation and about 45 per cent of the institutions do not have their own laboratory schools. Most institutions do not have space for staff members to study and work with small groups of students. The personal contact between students and teachers is gradually disappearing. A large number of them are either understaffed, or do not have a properly qualified staff, and the pay scales of teachers in many institutions are meagre. The institutions are not able to attract good students, and many of them do not have the proper academic background for the subjects which they have to teach in schools. Provision for stipends for students is meagre, and a large number of private institutions do not get adequate financial aids.

But the greatest handicap from which teacher education in this country is suffering is inadequate planning and lack of coordination. This will be evident from the fact that there is a dearth of trained personnel in certain areas even in those States where there is over-production of trained graduates, and that trained graduates are unemployed in a number of States even though there is a backlog of untrained teachers.

India will need about three lakhs additional teachers for her high/higher secondary schools during the Fourth Plan period. This means that the country will have to train approximately 75 thousand teachers per year more than what her training colleges are training at present. There is thus an urgent need for drawing and developing a comprehensive programme for teacher training. Special attention will have, however, to be concentrated on the improvement of : (a) professional training, and (b) teacher education institutions. Unless these two factors are tackled, the improvement of education of our children will be very nigh impossible. After all the future of schools depends on teachers.

1. *Infra.* Ch. XV.

INTRODUCTION

If educational research in India today is only in its infancy, it is partly because Education was one of the last areas to adopt scientific procedures for its improvement and expansion and partly because of historical reasons. Though the need for educational research was first pointed out in 1913 in the government resolution on educational policy, no concrete suggestions for a *modus operandi* were put forward till 1917. The Sadler Commission's recommendations that a Department of Education should be organised in every university with a Professor of Education as its head and that a 2-year Masters' Course in Education should be provided for those who take the B.T. Degree, marks the first leap forward in this direction. The Commission hoped that the Education Department of the universities would develop into centres in which the study of Education could be "stimulated and guided by many converging influences" and that new lines of enquiry and scientific investigations would flow from them. However, not till twenty more years elapsed, did this bright idea conceived in 1917 deliver itself in a suitable programme of action.

Universities like Aligarh and Banaras opened Departments of Education earlier than Bombay; but the M.Ed. Course, organised in 1936, by the Bombay University, was the first to provide a 2-year research programme as the requirement for the Degree. In 1941, the Bombay University instituted the Ph.D. degree also in Education. The research work carried out by the university students from 1937 to 1950 was solely directed at obtaining one of these degrees and had very little relation to felt needs. The imposition of a system of education alien to the land had done away with the need for experimentation at any level and so made individual work unnecessary and superfluous until the forties of the 20th century when people began to talk, for the first time, of a national system of education. Even when the need was felt, there was no possibility of embarking on serious research, as there was no machinery available for the research workers to communicate the results of their work to others in the field or to utilise them in actual situations. The usual fate of the products of research was, therefore, to remain on the shelves of the concerned libraries, accumulating dust with the passing of time.

A real change in this situation naturally came with the dawn of Indian independence. As a result of the rapid expansion of education at all stages and in all spheres of education through the successive five-year plans, the number of educational institutions in the country increased considerably. The University Education Commission and the Secondary Education Commission which reported on the reconstruction of education in India at this time greatly stressed the vital importance of research in education. Consequently, better facilities were provided for research, both fundamental and theoretical by the Ministry of Education of the Government of India, the State Education Departments and the Universities. Agencies like the Planning Commission, the University Grants Commission and the N.C.E.R.T. came forward with schemes to promote and finance educational research. Technical and financial assistance became available from foreign agencies and from the professional organisations for research. The Association of Teacher Educators in India, which began as the All-India Association of Principals of Training Colleges, not merely began to stress the need for organising research in the training colleges but indicated even programme priorities. A beginning at disseminating research information and helping the implementation of research programmes was made by governmental and private agencies. The period from 1950 to 1965 thus ushered in a new approach to research activities in education. Research was still confined mainly to the universities. But, at least, some of it was not for the purpose of meeting degree requirements. Many scholars are now engaged in schemes of research sponsored by one authority or the other or on schemes of their own pursuit, either to solve local or national problems to which their attention has been drawn or in a spirit of enquiry to find out fundamental truths. By and large, however, they work mostly in the University Departments or in association with them. We have now more than fifty universities offering facilities for research in education. Thirty-six of them run M.Ed. courses for which research is at least a partial requirement. Sixteen universities provide facilities for research work leading to the Ph.D. or other doctoral degrees. It is estimated that the number of scholars and other research workers in these University Departments coupled with those working in the research institutes under the State Departments number over 1,500.

The greater part of the volume of research in education is still the output of the students in the Post-Graduate Departments of Education of the universities and training colleges doing research for the degrees of M.Ed. and Ph.D. The National Council of Educational Research and Training has published a list of the theses and dissertations done by the post-graduate students during the period 1939-61. In this paper, it is proposed to review this work so that it may be possible to assess our achievements and limitations and suggest possible lines of improvement. It is to be remembered that a good deal of work has been done since 1961 in many of the universities and probably of a more intensive kind. This assessment may

not therefore reveal the true picture as it obtains today, but in the absence of full details regarding the work done in all the universities during this period, the study has been confined to the work done till 1961.

M.Ed. DEGREE

On the basis of the requirements for the Degree of M.Ed., the universities in India may be classified broadly into three groups, *viz.*, (1) Universities which award the Degree solely on the basis of examinations, (2) Universities which award the Degree on the basis of a thesis only, and (3) Universities which require the submission of a thesis in partial fulfilment of requirements of the degree. A few universities like Bombay, Karnatak and Mysore award the degree either by thesis alone or by examination and thesis or by examination only. The number and quality of the theses will differ very much according to the pattern followed. Some of the universities have a large number of theses to their credit. This may be due either to their having started the course earlier than others or to the fact that their enrolment is greater than in others.

M.Ed. courses were available in at least 16 universities by 1949. These are the universities of Aligarh, Allahabad, Andhra, Banaras, Baroda, Bombay, Delhi, Karnatak, Lucknow, Madras, Mysore, Nagpur, Osmania, Patna, Poona and Saugar. Naturally, there will be a greater output of research work in these universities than in many others, unless a thesis was not prescribed as part of the requirements of the Degree.

The numbers of M.Ed. theses, submitted in full satisfaction of requirements and in partial fulfilment of the requirements in each of the different universities are given in the table below :

TABLE 17
M. Ed. BY THESES

University	No. of theses
Banaras Hindu University	3
Bombay	53
Karnatak	4
M. S. University of Baroda	24
Mysore	16
Poona	6
S.N.D.T.	8
Total	114

A statement of the number of dissertations submitted for M.Ed. degrees in partial satisfaction of the requirements for the Degree is given below :

TABLE 18
NUMBER OF M. Ed. DISSERTATIONS

University	No. of dissertations
1. Agra	47
2. Aligarh	73
3. Allahabad	420
4. Andhra	31
5. Bombay	312
6. Calcutta	19
7. Delhi	214
8. Gorakhpur	38
9. Gujarat	45
10. Jabalpur	39
11. Kerala	26
12. Lucknow	167
13. Madras	247
14. M. S. University of Baroda	126
15. Nagpur	100
16. Osmania	144
17. Panjab	139
18. Patna	151
19. Poona	15
20. Rajasthan	131
21. Saugar	133
22. Sri Venkateswara	7
23. Utkal	39
24. Vikram	81
Total	2,744

The present trend is to discontinue M.Ed. (entirely by thesis). Hardly three or four universities continue the practice at present. The majority of universities award M.Ed. by papers or by papers and dissertation. A dissertation is submitted in lieu of two or one paper. The general scheme is given below :

A. Core Courses

- | | |
|--|-----------|
| 1. Philosophical and Sociological Foundations of Education | 100 marks |
| 2. Elements of Educational Research | 100 marks |

B. Areas of Specialisation (two papers of one hundred marks each from one of the following areas) :

1. Educational Psychology, Measurement, Guidance and Counselling,
2. Educational Administration,
3. History of Education,
4. Comparative Education,
5. Teacher Education, and
6. Curriculum.

200 marks

C. Dissertation

A candidate has to offer an additional group from an additional Area of Specialisation, if he is not required to submit a dissertation as partial fulfilment of M.Ed. regulations.

THESES FOR THE PH.D.

The total number of doctoral theses approved by Indian Universities till the end of 1961 is 83, distributed among the universities as follows.

TABLE 19
NUMBER OF THESES APPROVED FOR THE DOCTORATE DEGREE

University	Degree	No. of theses
Allahabad University	D. Phill.	7
Banaras Hindu University	D. Litt.	11
Bihar University	Ph.D.	1
Bombay University	Ph.D.	34
Delhi University	Ph.D.	5
Karnatak University	Ph.D.	1
Lucknow University	Ph.D.	5
Madras University	Ph.D.	4
M. S. University of Baroda	Ph.D.	9
Nagpur University	Ph.D.	1
Poona University	Ph.D.	3
Saugar University	Ph.D.	2
Total		83

SUBJECT-WISE CLASSIFICATION OF RESEARCHES DONE

The research done so far in the post-graduate departments of education are classified for the purpose of review under the following major heads—personality development and adjustment, personality attributes and abilities, learning variables, curriculum and methods of instruction, measurement and evaluation, ethical factors in education, philosophical studies, administration and finance, teacher education and historical research. The theses listed under each are only illustrative. No observations are made on the merits of the work, as full details were not available.

Personality Development and Adjustment

Studies relating to adjustment problems, behaviour problems, mental hygiene, guidance and counselling, personality development and exceptional children are a great need in our country. Very few universities have taken up studies in this area.

Studies on Personality.—Whether they be simple enquiries and investigations, studies in the philosophical aspects of personality, causal comparative studies or experimentally designed ones, not much work has been done on personality. Two studies at the Ph.D. level have been carried out, one dealing with the analytical aspects of personality (Allahabad), and the other with the measurement aspect of personality (Banaras). M.Ed. studies conducted mainly fall under the following heads—development of personality in Harijans (Rajasthan), personality development and environment (Baroda, Osmania), personality and mental health (Bombay), personality and discipline (Utkal), personality of adolescent girls (Allahabad), personality patterns in scheduled castes (Agra), personality of delinquents (Banaras), personality of Gifted Children (Allahabad), personality of handicapped children (Madras), aesthetics and personality (Calcutta), personality in relation to achievement (Nagpur), personality in relation to rate of learning (Madras), projective techniques in personality studies (Agra, Rajasthan, Delhi), fantasy and personality (Lucknow), personality in relation to counselling and school performance (Aligarh), personality in relation to socio-economic status (Aligarh), personality of basic school children (Madras), personality of boys and girls (Allahabad), personality of orphans (Madras), personality of pupils in residential schools (Madras), personality of student teachers (Madras), personality of headmasters (Vikram), personality of teachers (Bombay, Delhi, Lucknow) the Q technique with reference to personality (Gorakhpur), and psycho-analytic approach to personality (Allahabad). It is time that we take up systematic research on personality under some theoretical orientation. More and more work on the validity and reliability of personality studies may have to be encouraged. It would, perhaps, be more useful to concentrate on enduring personality traits and operationally definable categories like guilt, aggression, anxiety, withdrawal tendency, fantasy, etc.

Adjustment is an aspect of personality. A few studies have been carried out which deal directly with adjustment problems and a few others with the related aspects such as adjustment problems of the eldest child (Lucknow) and the youngest (Lucknow); social adjustment of children (Osmania), of delinquents (Rajasthan) and of pre-school children (Delhi); adjustment in relation to family (Baroda); diagnosis of adjustment problems (Punjab), measurement with reference to adjustment (Delhi); adjustment in relation to intelligence (Baroda); influence of films on adjustment (Allahabad, Madras, Rajasthan); comic and adjustment (Bombay); fantasy of children (Allahabad); fear of children (Aligarh); fear pattern of secondary school girls (Lucknow), and relationship of achievement with fear (Madras).

Adolescence is a period of crisis when adjustment problems become very critical. Several studies have been carried out which bear on this transitional period. Such are the studies on the problems of adolescents (Delhi), social adjustment of adolescents (Baroda), worries of adolescents (Delhi), fantasies of adolescents (Allahabad), adjustment problems of adolescents (Patna, Rajasthan), problems of college students (Lucknow, Rajasthan), and mental health of University students (Bombay). A few studies deal with the adjustment problems of student teachers (Agra, Jabalpur, Rajasthan, Delhi). A systematic attempt at studying this important area has, however, not been done in any single university. Different schools of psychology have, each, its own theories regarding personality development and adjustment, which require to be tried out in our own country to find out how far each is applicable. No effective attempt has also been made so far to integrate research on discipline, adjustment, behaviour problems, counselling, inter-personal relations and citizenship training. Research on adjustment problems has to be based on stable, enduring and integrative concepts which can bring several related problems under a common focus. More than analytical and speculative studies which might clarify the theoretical aspects of adjustment problems there is need for focussed, experimentally designed studies. Theories of learning, of conditioning and psychoanalysis have to be fully utilised in conducting research in this area.

Behaviour Problems.—A comprehensive theory of personality growth and development may bridge the gulf between adjustment problems and behaviour problems and thus provide an adequate background for conducting research on behaviour problems. Since causal factors behind behaviour problems are complex and socially conditioned to a great extent, it is obligatory that different universities should conduct their own studies in this area. Many studies have been conducted in the universities of Allahabad, Delhi, Bombay, Madras, Lucknow and Rajasthan, while others lag behind. On the problem of delinquent behaviour, examples of studies carried out are : remedy for delinquency (Madras), causes of delinquency (Bombay, Delhi), case studies of delinquents (Bombay, Lucknow, Saugar), home and delinquency (Madras), intelligence, aptitude and delinquency

(Bombay) and personality patterns in juvenile delinquents (Allahabad, Banaras). Some studies relate to attitudes of parents (Delhi), of headmasters (Punjab) and of teachers (Punjab) towards behaviour problems in pupils. There are a few studies on behaviour problems in co-educational schools (Punjab), in nursery schools (Rajasthan) and behaviour problems in children (Allahabad, Nagpur).

The concept of discipline presents a difficult problem to research workers. The difficulty stems from the lack of definiteness about the ideas involved. Very few researches have been reported on this concept in the West, since the areas covered by this concept have been split up and incorporated into related fields like adjustment, behaviour problems, etc. The studies done in Indian universities deal with the following problems: children's attitude to punishment, (Delhi, Nagpur), athletics and discipline (Saugar), discipline and freedom in education (Calcutta), discipline in post-primary section (Vikram), discipline in co-educational schools (Bombay), discipline and citizenship training (Madras), scouting and discipline (Madras), discipline problems facing student teachers (Allahabad, Lucknow), discipline in girls' hostels (Madras), psychological aspects of discipline (Kerala), curricular aspects of discipline (Allahabad), discipline in general (Allahabad, Delhi, Vikram), punishment in secondary schools (Lucknow), and the place of punishment and reward in education (Allahabad).

There is no clear-out distinction between discipline problems in the classroom setting and student indiscipline. However, student indiscipline is a problem for Social Psychology as well. Only concerted research can clarify several aspects of this problem—how far it is a personal problem of adjustment, to what extent it is a social problem, and how it is related to curriculum, school practices and administration. The few studies so far conducted are: causes of student indiscipline (Delhi, Baroda, Saugar, Utkal), student indiscipline and parental co-operation (Baroda), problem of student indiscipline (Patna), student indiscipline in relation to academic achievement (Saugar), student indiscipline in secondary schools (Aligarh, Delhi, Gujarat, Lucknow, Saugar, Allahabad), study of discipline from a psychological point of view (Kerala) and teachers reaction to student indiscipline (Osmania).

Delhi, Lucknow, Bombay, Allahabad, Aligarh, Saugar and Madras have attempted studies dealing with several aspects of discipline problem. Concerted research appears to have been taken up in Allahabad on its different aspects. It is important to realise, however, that the problem can be successfully tackled only through an inter-disciplinary approach. Sponsored research of the longitudinal type alone can render full justice to this multi-dimensional area.

Modern Psychiatry has emphasised the overwhelming importance of interpersonal factors in personality development. Adjustment connotes effective interpersonal relations. Emotional difficulties always have their interpersonal aspect. The interpersonal climate in the class room is further complicated by other relevant variables like curriculum and methods of instruction. Research on this vital area is, however, scanty. Interpersonal factors should be given equal attention, with instructional factors, in our research programmes, since it is both qualitatively and quantitatively related to the teaching-learning process. The studies done, so far, are mostly of the causal-comparative type, as for example, on factors influencing interpersonal relationships among pupils (Lucknow, Madras, Nagpur), among girls (Allahabad, Rajasthan), and in secondary schools (Baroda). The University of Madras seems to have, by and large, taken the lead with respect to research on interpersonal aspects.

Guidance and Counselling.—Research in the area of guidance and counselling has to be related to that of adjustment and behaviour problems. Counselling concentrates on the diagnostic and therapeutic aspects of adjustment, and the theories of personal development and adjustment provide the theoretical basis for the counselling process. The studies dealing with personal counselling, educational counselling and vocational counselling which have been done in the universities are : counselling in multi-purpose schools (Agra), counselling in secondary schools (Saugar, Vikram), hobbies and counselling (Vikram), need for counselling (Patna, Saugar, Rajasthan), records in counselling (Delhi), criteria for educational counselling (Nagpur), tools of educational counselling (Rajasthan), role of teachers in educational counselling (Osmania), vocational implications of counselling (Saugar), vocational counselling in multipurpose schools (Rajasthan), need for vocational counselling (Allahabad), relation of vocational counselling to vocational education (Allahabad), survey of vocational counselling (Bombay), and uses of tests in vocational counselling (Osmania). It is easy to find that we have so far touched only the fringe of the problem of counselling. We ought to know more about the attitude of teachers, parents, pupils and community leaders in India towards counselling as well as the theoretical aspects of counselling and evaluation of counselling services. Counselling theories are closely allied to personality theories, and so, research in relation to both 'end' theories of purpose, meaning and values (philosophical) and 'means' theories of the procedures to be used (Scientific) will have to be undertaken. Vocational choice theory, theory of vocational maturity and other related theories should also stimulate more research. Experimental work will have to be effectively designed for conducting research on evaluation of counselling.

Exceptional Children.—Democracy connotes not only equality of opportunities, but also, equalisation of opportunities. Differential psychology, which concentrates on individual differences, is therefore, an aspect meriting our attention but it has yet to make its

impact on education. Most universities have neglected this area. Allahabad, Bombay, Madras and Rajasthan have conducted a few studies. Of all kinds of physical handicaps, that of blindness ought to receive our greatest attention as it highly incapacitates one educationally. A few studies have been done on this—the education of the blind (Punjab, Patna, Aligarh), physical education for the blind (Madras), and social adjustment of the blind (Delhi). Research on the learning processes in the blind is likely to throw much light on the basic principles of learning in general and the comparative effects of audio and visual aids in teaching. There are a few studies dealing with the deaf and dumb—the education of the deaf (Poona, Allahabad), training for the deaf (Allahabad), vocational education for the deaf (Allahabad), personality problems of the dumb (Madras), education of the physically and mentally handicapped, (Bombay), and a comparative study of the gifted and the deficient (Allahabad). Studies of mentally deficient children merge into those of retarded children, and a few case studies have been carried out of retarded children (Madras, Bombay). Studies on retardation in English (Lucknow), in Mathematics (Osmania) and in reading (Madras) are available but not in many subjects and aspects of the learning process. Allahabad, Bombay and Madras have contributed more to the study of exceptional children than other universities. To Bombay goes the credit of pioneering this type of research in India.

While humanitarian research compels us mainly to care for and educate the backward, the deficient and the defective, national interest dictates that we identify and provide maximum encouragement to the gifted. The studies undertaken so far include the activities of the gifted (Rajasthan), backwardness in the gifted (Aligarh), case studies of the gifted (Lucknow, Rajasthan), comparative studies of the gifted and the backward (Allahabad), education of the gifted (Allahabad, Bombay), personal characteristics of the gifted (Allahabad), problems of the gifted (Madras), art expressions of the gifted (Allahabad), and study of superior students (Baroda). There is only one study relating to under-achievement of the gifted. While Allahabad has concentrated on studies of the major categories of exceptional children, the gifted as well as the defective and backward, and done good work in several related areas, many other universities have conducted only very few studies on them.

Developmental studies.—Another area which is closely related to personality and adjustment is developmental studies. Since developmental psychology has established itself securely, educators ought to pay adequate attention to this area. The capacities of speaking, thinking, reasoning and judging do not come off suddenly. They begin in childhood and evolve slowly. To project adult standards of reasoning and judgement upon children is ridiculous as well as dangerous. Language development constitutes an important area—the rate and tempo of vocabulary development, the hereditary and en-

environmental factors facilitating it, and the problems of children confronting different language patterns at the same time, are problems for research in this field. The studies so far done are the language development during nursery years (Mysore, Allahabad, Bombay, Osmania), vocabulary attainments (Bombay, Nagpur), vocabulary in English (Saugar, Lucknow, Rajasthan), vocabulary of children (Rajasthan, Bombay, Allahabad, Delhi) and the influence of local dialects on vocabulary (Saugar). Of all phases of mental development the learning of language has traditionally attracted most attention, because of the complexity of language and the ease and swiftness of learning. Many psychologists feel that the study of the process, whereby children learn to speak and understand language, holds the key to many fundamental problems of behaviour and learning. Moreover it may help parents to know whether language development is proceeding in a normal fashion, give information to guide the development of curriculum in schools, and help in the formulation of special educational programmes for the handicapped.

Thinking constitutes the very foundation of intellectual activity, and while a good deal of research has been done in the West on the development of thinking in childhood, we have so far done very little work on it. Madras has two studies on the development of imagination, one during childhood and the other during late adolescence. The development of reasoning comes under the development of thinking. The child's concepts of causal relations slowly build up along with his perception and learning. Research has yet to unravel several interesting, though complex, aspects of the reasoning process. The only work on reasoning and thinking which has been reported is a Ph.D. thesis from Banaras. More of analytical as well as experimentally oriented studies on language development and thinking process are required. Longitudinal as well as cross-sectional studies on different age-groups (as done in Madras), may prove fruitful in this area of developmental psychology. Mere mechanical counting of words spoken by children of a particular age group is meaningless unless correlated and integrated with a sound theory of language development. On the important area of moral development, there are three studies—the development of the ego-ideal (Banaras) and the development of moral adjustment (Madras, Rajasthan). Emotional development, though equally important, has stimulated only one study (Lucknow). Social development in children is an area for concerted research, but except for a study on the development of social behaviour in children (Nagpur), very little has been done.

Personality Attributes and Abilities

Attitudes.—Universities like Allahabad, Bombay, Delhi, Gorakhpur, Lucknow, Madras, Nagpur, Punjab and Rajasthan have undertaken several studies on attitude. Since attitudes are conditioned to a great extent by socio-cultural factors, there is a real need for all the universities conducting attitude studies. Before introducing far-

reaching changes in curriculum and methods of instruction, the attitudes of pupils, teachers, parents and community members have to be ascertained. The areas so far covered relate mainly to factors conditioning attitudes, and the attitudes of pupils to religion, school subjects, teachers, punishment, marriage, N.C.C. training, social service, co-curricular activities, co-education, technical education, group activities, home work, morality, music, poetry, home, film, untouchability, etc. There are a number of studies on the attitudes of teachers towards behaviour problems, co-education, vocation, supervision, corporal punishment, internal assessment, etc., or on the attitudes of student teachers towards the teaching profession, basic training, children's behaviour, co-curricular activities, community training, or on the attitude of parents towards teachers' problems, co-education and women's education. There are some studies dealing with the relationship of attitudes to achievement. Allahabad has a study on the psychology of attitude. No study on the validity and reliability of attitude measurement has, however, been made so far. Theories of attitude measurement ought to receive our undivided attention. New techniques in attitude-scale construction are to be encouraged. There is also a great need to systematise what has already been done in this area.

Intelligence.—In the traditionally important area of intelligence, the majority of the studies in our universities deal with the adaptation and standardisation of tests devised in the West. Work done is mostly on group tests of intelligence (Delhi, Osmania, Bombay, Allahabad, Banaras); performance tests (Gujarat, Bombay); intelligence in boys and girls (Patna); intelligence concrete and abstract (Allahabad), critical study of Koh's block design test of intelligence (Allahabad, Delhi); the Manikin test as a measure of intelligence (Kerala), deriving norms for performance tests—Porteus Maze test (Delhi), Minnesota Paper Form Board test (Gujarat), cube construction and Dearborn test (Delhi), Goodenough's Draw-a-man test (Delhi), and deriving norms for non-verbal group test—N.I.I.P. Group test (Aligarh). A few studies bear on the relationship of intelligence to other important variables such as delinquency, achievement, adjustment, sex, parents' profession, economic status, neuroticism, physical growth, reading interests, recreational activities, social acceptance, span of memory, suggestibility and vocational interests. About ten studies relate to relationship of achievement to intelligence. Allahabad, Bombay, Delhi and Baroda are among the universities which have conducted several studies on intelligence and intelligence testing. But more studies relating to the validity, reliability and such related concepts are needed. Analytical and critical studies which classify the concept of intelligence are to be given equal emphasis along with the measurement aspect of intelligence. Only planned and systematic research can make significant contributions in this area. Delhi has made three attempts to evolve norms for the "Draw-a-man" test. The three theses have tried to standardise the test for the different age-groups, 3+ to 8+, 6+ to 10+ and 11+ to 14+. Norms for

different groups may also be attempted in this manner. But, however ambitious and painstaking individual researches may be, they have their limitations, with respect to time, and finance. Only sponsored research may be able to standardize intelligence tests on large samples and for different groups all over India. It should be possible for different universities to profitably co-operate in standardising culture-free intelligence tests of the performance types as well as to prepare and standardise verbal intelligence tests with norms for important linguistic and geographical areas.

Aptitude.—Studies relating to aptitude, which is a more enduring concept than attitude and intelligence, are comparatively fewer in number. Among them are the following : aptitude for mathematics (Andhra, Osmania), aptitude of delinquents (Bombay), aptitude for music (Madras), mechanical aptitudes (Osmania, Allahabad, Baroda, Bombay), teacher aptitude (Baroda, Vikram), aptitude for press workers (Allahabad), aptitude for textile workers (Allahabad), aptitude test in physical science (Andhra), numerical aptitudes test (Bombay), clerical aptitude (Delhi), scientific aptitude (Utkal), scholastic aptitude (Nagpur), vocational aptitude (Delhi, Gorakhpur), socio-economic status and aptitude (Andhra), psychological study of aptitudes (Vikram).

The validity of intelligence as a unitary concept is increasingly being questioned. General intelligence tests are not very useful for identification of those students who wish to enter vocational training programmes, commercial courses, music, art, etc. The concept is therefore split into differential abilities. More of concentrated research on differential aptitude batteries for prediction of success in specific jobs is required. Aptitudes for music and art have been totally neglected here. Since our artistic expressions are conditioned by our socio-cultural heritage, how far we can accept music and art aptitude tests made in the West has to be decided. More studies dealing with the physiological and measurement aspects of art and musical ability are required. There is only one study dealing with the testing of art ability (Poona). Studies done so far are sporadic, and even that by a few universities like Allahabad, Andhra and Bombay. Without standardised aptitude tests, vocational guidance cannot make any headway. Differential aptitude batteries have several advantages ; for instance, since the tests are standardised on the same population, typical profiles for different vocations can be obtained. But the labour involved in the standardisation of such tests is heavy, and so work on them can be effectively carried out only through research projects which are sponsored by Government or other agencies.

Achievement.—Achievement testing is in vogue in most educational institutions and a great number of M.Ed. theses deal with standardising achievement tests. Achievement tests are very much needed for assessing student progress, for the comparative assessment

of schools, for clarifying the objectives of instruction, and for bringing out indirectly, dynamic changes in the methods of instruction; and so, work on them has to be encouraged. In Mathematics, social studies and general science, a large number of achievement tests have been prepared. There is hardly any achievement test in the classical languages. Achievement tests in the biological sciences are also very few. English can claim only a dozen theses relating to the preparation of achievement tests. The universities of Allahabad, Bombay, Delhi, Punjab, Patna, Lucknow, Madras, Bombay, Osmania, Saugar, Vikram and Kerala have made a number of studies on achievement testing. Allahabad, Delhi and Osmania have attempted construction of achievement tests in several subjects. There are also a number of causal-comparative type of studies relating achievement to other important variables like vocational interests, co-curricular activities, physical education, sports, age, sex, social adjustment, language proficiency, castes, parents, attendance, extroversion and introversion indices, social, physical, environmental and emotional factors, home background, influence of mother-tongue, pre-school education, science clubs, mid-day meals, sociometric status, attitude, imagination, intelligence, behaviour problems, personality, verbal ability, memory, visual perception, etc. Several of these studies may have to be replicated if we are to take the generalisations seriously. Factor analytic approach should be applied to the innumerable and overlapping variables which are causally and functionally related to achievement, and a few dynamic variables like memory, motivation, socio-economic index, intelligence, etc., should be isolated for intensive research, if we are to make the fullest use of these tests in the teaching-learning process.

Learning and Related Variables

Learning.—Research on theories of learning should be given the pride of place in any scheme of educational research. But we have very few studies bearing directly on learning and these are—the educational implications of the theories of learning (Allahabad, Gujarat), Gestalt theory of learning (Allahabad), learning process at different ability levels (Agra), relation of rate of learning to personality (Madras), and school practice and theories of learning (Bombay). Psychological variables like motivation, memory and attention are dynamically related to the teaching-learning process, but many universities have yet to conduct research in these areas.

Motivation.—Motivation is a dynamic concept intimately related to teaching. There are a few studies on motivation in general and a few others on motivation with respect to different subjects—motivation in education (Allahabad), motivation in geography (Allahabad) and motivation in teaching history (Allahabad, Delhi). Allahabad has thus taken the lead with regard to research on motivation. Studies in the field should be subjected to rigorous experimental designs. More of causal-comparative studies correlating motivation with related psychological variables like interest, intelligence, aptitude, etc.,

are to be taken up in future along with analytical and theoretical studies on motivation.

Attention and Memory.—Only two studies directly relating to attention are reported—effect of co-education on attention (Punjab) and the relationship of performance in intelligence tests to span of visual attention (Madras). Studies on memory are comparatively greater; among them are the effect of note-taking on memory (Patna), factors affecting memory (Madras), part and whole method in memorising (Allahabad), relation of achievement, verbal ability and reasoning to memory (Nagpur), studies on span of immediate memory (Allahabad) and studies on memory (Madras). Allahabad has conducted well-planned studies on memory—there are at least 6 studies on the span of memory, 5 for the age-groups 7+, 8+, 11+, 12+, and 13+ in children and one for the age-group 12+ in girls. Meaningful generalisations on the developmental sequence of the span of attention are possible through such studies.

Interest.—Interest has received comparatively greater attention from the research workers. Areas covered by interest studies relate to different types of interest, interests of children and adolescents, interest in different subjects, scientific interests, academic interests, aesthetic interests, recreational interests, and interest in vocations. Scientific interests ought to receive greater attention. The measurement of scientific interests, the socio-psychological and cultural aspects of scientific interests and the relation of scientific interests to aptitude for science may turn out to be a promising area for research. Compared to the importance of the topic in this scientific age, research studies carried out in our universities are not at all encouraging. The studies listed are: scientific interests of middle school pupils (Madras), scientific interests of secondary school pupils (Osmania, Sri Venkateswara), and sex differences in scientific interests (Madras). Since vocational guidance may have to play a leading role in building the future of the nation, there should be more of research on the vocational interests of children. Among the studies relating to the dynamic factors which influence vocational interests of children are parents' influence in vocational interests of girls (Allahabad), vocational interests of college students (Allahabad, Rajasthan) and vocational interests in general (Andhra, Bombay, Delhi, Madras, Punjab, Rajasthan, Sri Venkateswara, Utkal).

Philosophy of Education

A few contemporary writers have expounded the view that the central problems of education are problems of moral and ethical judgment, and so research in education should embrace problems in moral and political philosophy. Educationists should take up the challenging task of formulating a conception of pedagogical methods compatible with the psychological facts about learning on the one hand and with our democratic ideology and ethical values on the other. Several

studies have been done in our universities bearing on the philosophy of education. Patna leads with nearly 25 per cent of the total number of theses relating to this field. Allahabad, Baroda, Nagpur, Osmania and Punjab have studies describing the educational ideas of religious leaders and thinkers. Kerala has a study on the educational ideas of Mahatma Gandhi.

Ethical Values in Education

It is well known that education should have both short-range and long-range objectives. Inculcation of ethical and socially productive behaviour constitutes one of the cardinal long-range aims. Both character education and religious education come under this aim. But research on character may be fruitful only if we give adequate definition to the concept of character. There are a few studies on character, like the development of character in children (Rajasthan), and character and Hindi poetry (Osmania). Work on tests of character has been done for the Degree of Ph.D. in Bombay. Studies on character naturally merge in the sphere of moral and religious instruction and here there are theses on moral education of school children (S.N.D.T. Women's University), moral instruction in denominational schools (Agra), moral education (Patna, Saugar, Allahabad) and evaluation of the syllabus for moral instruction (Bombay). There are a few studies on religious education—on general aspects (Bombay, Madras, Patna, Poona, Gujarat) and on religious instruction in ancient India (Saugar). Most of the studies are of the historical and survey type. The notion that character is beyond testing and evaluation and the formalities of scientific experimental study has to be discarded. An operational definition of character should be adopted and followed up by well-designed experiments in the laboratory or field-setting where factual data relating to character traits and character formation can be effectively tested. Hartshorne and May's famous study on character should give us inspiration to conduct experimental study on character traits. Ego psychology and self psychology are coming into prominence and they may provide a valuable frame of reference for conducting research on character development.

In a country like India with different religions, the problem of religious education offers a fertile ground for research. Perhaps it might be useful that those who conduct research on religious education take greater interest in the psychological findings relating to personality development and adjustment and the theories of learning. The importance of the science of psychology for religious education has hitherto not been fully realised. Systematic research may help clear away many prejudices, clarify objectives and successfully evaluate the outcome of character education. Since character education touches on values and ideals, analytical and philosophically-oriented research studies should be undertaken to clarify the goals of moral and religious instruction and reconcile the objectives of religious leaders with the findings of modern psychology and sociology relating to personality development and adjustment.

Curriculum, Text-books and Methodology

Curriculum.—The problems of what should be taught have always puzzled educationists, and naturally it offers perennial scope for research. The curricula in science and Social Studies have stimulated a good number of studies. The universities of Allahabad, Bombay, Madras, Osmania, Patna, Saugar and Kerala have paid some attention to curriculum research. A few of these universities have paid equal attention to co-curricular activities as well. Most of the studies are of the causal-comparative or investigation types and they mainly relate to the following aspects—attitude towards curriculum, curriculum in basic schools, comparative studies of curriculum, correlating curriculum with children's interests and curriculum in different school subjects including art and craft and physical education. There is at least one study each on curriculum in relation to failure and in relation to adolescent needs and on the sociological and psychological basis of the curriculum. The only study at the Ph.D. level is on the basis and structure of the curriculum in secondary schools, (Bombay). More research is called for in this area, especially with regard to primary schools. Two studies on the suitability of Fishing and Coir as Basic Crafts have been done in Kerala. Studies of this kind on other local crafts may be desirable.

Text-Books.—Research on text-books merges into that of curriculum research. Research studies pertaining to text-books in all the major subjects have been carried out at Allahabad, Bombay, Delhi, Gujarat, Lucknow, Madras, Baroda, Osmania, Punjab, and Saugar universities. Text-books in social studies have been subjected to many more studies than those in other subjects. Only 4 studies, however, have been carried out based on the analysis of science text-books. A few of the studies deal with the criteria for the preparation of text-books in different subjects. Some universities have concentrated on vocabulary in text-books.

Teaching Methods.—Universities like Allahabad, Bombay, Madras, Osmania, Patna, Kerala and Saugar have several studies covering methods of teaching different subjects, while most others have at least a few. The majority of the studies are of the investigation and enquiry type. A good number of studies relate to pupil errors and difficulties in different subjects. Diagnostic studies of teaching and learning in different subjects and remedial teaching in different subjects have also been done in many universities. There are at least a few experimental studies on each subject involving comparison of traditional methods and modern methods of teaching different subjects and teaching with audio-visual aids and without them. Other types of studies include vocabulary in teaching different subjects, correlated teaching of different subjects, etc. Regarding the quantum of research work with respect to different subjects, it is seen that the biological and commercial subjects, and agriculture have received scant attention in several universities. Studies on methods

of teaching classical languages are also very few. It cannot be said that the regional languages have been neglected, though Hindi and English have received comparatively greater attention. Experimentally-oriented research studies have yet to be conducted on art and craft. Among the few studies on art and craft, not one deals directly with the methods of teaching these subjects ; most of them are mere enquiries. In the area of music also, most of the studies deal only with the aptitudes, attitudes and interests of children ; research on methods of teaching music has yet to be done.

Physical Education and Health Education.—The number of studies undertaken on physical education is itself a clear proof that we have neglected the physical and the health aspects of education. It cannot be denied that a great majority of our children suffer from malnutrition, ill-health and diminished vitality. Most of the universities excepting Allahabad, Bombay, Madras and Kerala have paid scant attention to this area. With respect to health education and related aspects, both Allahabad and Bombay have done pioneering work. Bombay leads with respect to the number of studies undertaken on physical education. Most of the studies, however, are only investigations and general enquiries dealing mainly with the organisational and curricular aspects of physical education ; but there is one Ph.D. study, relating to achievement-testing in physical education. Nagpur has conducted a study on the relationship between physical education and scholastic attainments and another on the standardisation of physical efficiency tests for boys between 6 and 11. It is time that enquiries and investigations are replaced by experimental studies on the various important dimensions of the problem with their accent on measurement. Researches on indigenous games should be welcomed. Theories of developmental psychology, especially of physical and mental development, which have important bearing on research relating to physical education and health education, should be reviewed. There are only half a dozen studies on health education and they are mostly investigations.

Education for Citizenship and Democracy.—The military training programmes like the N.C.C., and the A.C.C. and the discipline training programmes given to Scouts and Girl Guides are part of education for responsible citizenship. Education for leadership may also be classified broadly under citizenship education. Social education is also an area coming under education for democracy. Since democracy connotes equalisation of opportunities, education may have to level down inequalities with respect to educational opportunities. Adult education, women's education, tribal education, education for refugees and minority groups are all, thus, aspects of education for democracy. Only Bombay and Allahabad have conducted a few studies on the N.C.C. and the A.C.C. The number of studies are disproportionately small compared to the importance of the problem. With regard to research on social education, Bombay and Saugar top the list. Research on leaders and leadership qualities is scanty.

There are only five studies relating to this topic. Field studies on the model of the situational test and experimentally oriented research will definitely give a promising lead in this area. The importance given to women's education is an index of the nation's progress. Most of the studies relating to it are of the survey type. Allahabad, Bombay, Madras, Osmania, Patna and Vikram have done a few studies each. Punjab has carried out studies on co-education. There is one study on the psychological and social aspects of girls' education (Osmania). Progressive countries are giving more and more importance to adult education and in this area, we do not lag behind. Madras, Allahabad, Bombay and Osmania have done good work and some little work has been done in many other universities.

Examination and Evaluation

Instruction remains incomplete unless the students' progress is evaluated. Examinations, as conducted today, are not suitable instruments for proper evaluation. Education is expected to bring about changes in the cognitive, behavioural and attitudinal dimensions of personality. By the traditional tests and examinations, we generally assess the cognitive aspects of personality only. Research is needed to improve not merely the outcomes of the learning of ideas but also of the skills acquired and their effect on total personality. The research carried out, so far, relates to the following areas : evaluation in teaching (Lucknow, Agra, Vikram, Punjab), evaluation in secondary schools, (Patna, Nagpur), evaluation in the primary schools (Kerala) ; and evaluation in Hindi (Baroda), in social studies (Patna, Utkal) in history (Patna), in Mathematics (Madras, Jabalpur), and in religious instruction (Punjab), and causes of poor results (Allahabad). Analytical study of answer sheets (Gorakhpur), comparative study of traditional and new type tests (Aligarh, Calcutta, Osmania, Punjab), and diagnostic studies of answer sheets in English (Madras, Punjab), in science (Madras), and in geography (Madras), have also been undertaken. A study on the predictive value of examination has been done for the Ph.D. degree (Delhi). Studies on examinations at the end of primary stage (Saugar) and in universities (Bombay, Allahabad), on the factor analysis of B.T. examination marks (Punjab, Allahabad), on the history of examinations in India (Delhi), on reliability of public examinations (Punjab), and on subjectivity in examinations (Delhi) complete practically the range of research in this field. This is one area in which research done in universities could directly be utilised to reform present procedures and where reform is urgently needed.

History of Education

The present becomes meaningful only in the light of the past. This is all the more true with respect to education, which is a socio-cultural and historical process. The structure organisation and functions of education have all historical roots. Only a few universities have worked on some of the several aspects of the history of education

in India. Bombay university leads with the greatest number of research studies in this field, and they are spread over a wide area. The Ph.D. studies done in Bombay are on the history of education in general, history of education under British rule, history of education in Kashmir, and Women's education. Work at the Ph.D. level has been done also in Saugar on the history of women's education, in Baroda on Muslim education in Gujarat, and in Lucknow on pre-primary education. As regards the M.Ed. studies, the following areas have been dealt with : history of education in general (Bombay, Baroda, Allahabad, Kerala, Osmania, Punjab, Utkal), history of primary education (Bombay), women's education (Bombay, S.N.D.T. Women's University, Madras, Punjab, Saugar, Utkal and Vikram), physical education (Baroda), health education (Allahabad), basic and technical education (Jabalpur), and teacher education (Rajasthan, Bombay). Aligarh, Osmania and Patna have studies on the history of education during ancient and mediaeval periods in India. It would appear that the few universities which have conducted historical research have more or less concentrated on one or two aspects of the problem. Madras, Punjab, Saugar, Utkal, Vikram, and S.N.D.T. Women's University, emphasise the historical aspects of women's education. Baroda has confined itself to physical education and Delhi to the history of examinations in India. There is general tendency to belittle historical research, which is highly discouraging. The historical perspective will be very helpful to us since we are now planning to have dynamic and positive changes in all aspects of our educational system.

Administration, Supervision and Finance

Organisation and Administration.—Educational organisation and administration constitute the structural framework of the total educational process. New ideas can be effectively and quickly translated into action only through a flexible, well-co-ordinated and well-thought out administrative set-up. But educational administration has not as yet received the attention that it demands from educational research workers in India. There is only one study at the Ph.D. level—some problems of educational administration in India (Bombay). Universities like Aligarh, Poona, Gorakhpur, Gujarat, Jabalpur, Lucknow, Nagpur, Osmania and Sri Venkateswara have hardly any study on educational administration. The studies so far carried out relate to the following areas : administration in primary education (Bombay, Allahabad, Saugar, Utkal and Vikram), administration in secondary education (Allahabad, Bombay, Madras, Saugar), administration of multipurpose schools (Saugar), administration of social education (Vikram), administration of aided schools (Allahabad), local educational administration (Rajasthan), administration of extension services (Baroda), and teachers' participation in school administration (Punjab). Kerala has carried out a study on the problem of high school governance and Delhi has a thesis bearing on the problems of headmasters. Since the whole educational process has become more complex, conse-

quent on the dynamic, social, political and economic changes, only applied research on educational administration can strengthen administrative efficiency. Duplication of expensive educational research programmes by State and university authorities without co-ordination, the non-employment of specialists in the different branches of educational technology, lack of articulation from lower to higher levels in teacher training, lack of co-ordination between education at the university and secondary levels, conflicting and often overlapping areas of control by private agencies and government are a few of the vexing problems that confront the future research workers in educational administration.

Supervision.—Supervision of schools is an important aspect of educational administration. Upon effective supervision hinges the trend of future development of each school. Modern theories of measurement and evaluation have to be applied to improve this vital area, and for this research on techniques of supervision should be taken up. Research has also to concentrate on the motivational, attitudinal and interpersonal aspects of supervision. Very little research work has been done in this area. Only studies at the M.Ed. level are available. Several universities (Poona, Aligarh, Allahabad, Gorakhpur, Gujarat, Madras, Nagpur, Osmania, Punjab, Sri Venkateswara and Vikram) have totally neglected this area of educational research. Since every school exists to serve a multitude of purposes only a complex system of supervision which would effectively comprehend all the different aspects and segments of school life and work and the progress of teaching can make real contributions to the advancement of education. The future studies may, therefore, have to concentrate on the several sub-divisions and narrower aspects of the total problem of supervision. Supervision of the provision and maintenance of facilities bearing on the physical and mental health of students is a vital necessity. Supervision of academic and non-academic aspects have to be studied separately. Evaluation of co-curricular activities and other social and cultural programmes should constitute an important area for supervision. Research on school-community relations regarding each school may help supervisors to evaluate each school system meaningfully against its own community background. The few studies that have already been carried out in Indian universities may be quoted—supervision in general (Agra, Delhi, Jabalpur, Kerala, Utkal), duties and responsibilities of supervisors (Bombay), teachers' and superintendents' conception of supervision (Lucknow), attitude of teachers towards supervision (Rajasthan), supervision in primary section (Patna), instructional supervision (Saugar) and office records in supervision (Baroda).

Educational Finance.—How much of money shall be expended on education and on what basis it should be distributed constitute very important problems to be studied. How to raise the money needed for the increasing expenditure on education, how to apportion it

among the various segments and heads of expenditure and how to rationalise expenditure are also problems which need to be studied. Control of education through financial assistance by Central and State governments and private agencies needs investigation. Ways and means have to be evolved to transfer financial responsibility for education to the local communities in most of the States, at least with regard to primary education. The economics of education is an important area for future research. Only a few universities have conducted research so far in this area—Bombay, Baroda, Kerala, Madras, Rajasthan, and Nagpur. The only Ph.D. study on educational finance in India was conducted in Saugar. Bombay has one study on federal finance relating to education and two studies on financing primary education. Kerala, Madras, Rajasthan and Nagpur have each a study on the problems of educational finance in the respective States.

Teacher Education and Allied Problems

Most universities in India have conducted studies on the important area of teacher personality and teacher education. Bombay and Allahabad have concentrated mainly on teacher personality and training techniques. Punjab has devoted greater attention to research on attitudes of teachers, and Delhi has brought out several studies bearing on teacher selection and personality traits. Bombay, Patna, Rajasthan, Saugar, Allahabad, Gujarat, Lucknow, and Baroda have carried out research relating also to the socio-economic status of teachers. Collectively speaking, the majority of the theses are of the general investigation type. Attitude studies surveying, describing or measuring teachers' attitudes towards educationally related problems like corporal punishment, behaviour problems, school subjects, science education, inspection, teaching profession, retention of English, teacher training, school discipline, class-room problems etc., form a good part of the rest. There are one or two studies on each of the following aspects : leisure time activities, practical work in teacher training, training teachers for different subjects, teachers for the handicapped, teachers and guidance, reading interests of teachers, primary school teachers, working conditions of teachers, frustration and job satisfaction, work load, working conditions of teachers, and the problems of women teachers. Kerala has a study on the reasons for the choice of the teaching profession. Studies on teacher effectiveness and teacher selection are not encouraging with respect to quality and the quantum of research undertaken. There are four studies on the qualities of the successful teacher (Bombay, Delhi, Punjab). All the studies are based on the ranking method and they lack the precision of measurement in experimental studies. Utkal has worked on a test for the selection of candidates for teaching and Delhi has a study dealing with the validity of teacher selection tests. Baroda has brought out a Ph.D. study on standardisation of an aptitude test for secondary school teachers. We need much precise, painstaking research on teacher effectiveness, oriented

towards a variety of goals in a variety of educational institutions. We should encourage research in field situations with large samples of teachers and students along with research in laboratory situations with small samples. More than anything else, we should have a comprehensive theory of teacher-behaviour and learning, before research could be successfully organised ; for such studies can be carried out only with a background knowledge of the unifying theoretical concepts from learning, group dynamics, psychotherapy and cultural anthropology. Researches in the West point towards the presence of teacher traits and conditions which may be related to certain dimensions or aspects of teacher effectiveness. There is increasing evidence that prediction can be made with greater certainty for specified dimensions or components of the criterion. Prediction of over-all teacher effectiveness may be possible only to the extent that some general agreement can be reached regarding the dimensions comprising over-all effectiveness, implying a common set of educational values.

Comparative Education

It appears that no work has been done on Comparative Education so far in any Indian university either at the Ph.D. or M.Ed. level. This is in marked contrast to the advanced countries of the world where scholars study foreign systems of education to assess their own achievement and work.

CONCLUSION

So many subtle factors influence the selection of topics in a university for research and the concentration of studies in any one or more area of educational research. Social, cultural, economic and political factors play not an insignificant part in this. The philosophy of the particular department or institution, and the qualifications, previous experience and personal predilections of the supervisors who are to guide the research, are factors which exert a decisive influence on the selection of topics. It is not always the case that the departments proceed with a thorough and comprehensive over-view of the objectives of the research to be undertaken in the course of a period of years. While it is good that they concentrate on local problems, they should not overlook important problems and issues of national importance. The facilities available in the Departments and the time available to those engaged in research often set limitations on the work to be done. Lack of planning and lack of co-ordination have impeded the progress of research on the right line to a large extent.

What has been accomplished in the field of educational research during the short period since it was taken up in our universities is still not inconsiderable. Though a good part of the work done is sporadic and unrelated to each other, still, we find that broadly the universities have concentrated their research on one or more areas.

Thus, Agra has done much work in the areas of intelligence and teacher education; and Aligarh on personality adjustments, achievement tests and teaching of languages. Lucknow has devoted much attention to studies on attitude and interest, text-books and teaching aids and achievement testing, and some attention to areas relating to adjustment. Madras has concentrated on studies relating to personality and adjustment problems including interpersonal and social relations, without neglecting in the least research on text-books, methods of teaching different languages and evaluation and examination. Gorakhpur has paid more attention to the study of attitudes. Baroda has several studies on test construction and evaluation in general. Nagpur has given importance to attitude and aptitude testing and philosophy of education. Osmania has the greatest number of studies on methods of teaching. Punjab's major areas of interest constitute achievement tests, teacher education and women's education. Patna's greatest contribution is towards philosophy of education, though work done on methods of teaching and achievement testing is not insignificant. Rajasthan has devoted great attention to attitude and interest measurement, behaviour problems in children, education for exceptional children and basic education.

Universities like Allahabad, Bombay and Delhi have explored in detail several areas of education. Allahabad has to its credit work on almost every aspect except that of developmental studies. Bombay has concentrated on the social and vocational aspects of education and their related fields in psychology, namely, intelligence and aptitude testing. Among the other aspects to which Bombay has paid considerable attention are tribal and rural education, physical education and citizenship education. Commendable work has been done there also on philosophy of education, historical studies and language development.. Achievement testing and evaluation may be given the pride of place in Delhi. Several studies have also been done relating to vocational interests, reading interests, adjustment and personality measurement, as well as on the socio-economic aspects of education.

With regard to studies at the Ph.D. level, Bombay University leads with 34 Ph.D. theses. Benaras has eleven studies and Baroda nine. Allahabad, Delhi, Lucknow and Madras have a few Ph.D. studies to their credit. But it is to be regretted that several universities which had embarked on post-graduate studies and research quite early could not claim even a single study at the Ph.D. level upto 1961.

A trend towards more and more of experimental studies has been visible with the passage of years, though the progress in this direction is not equally marked in all the universities. The first Ph.D. thesis of Allahabad is of the enquiry and investigation type while the last one approved for the Degree of Ph.D. in 1958 is an

experimental investigation into the personality patterns of delinquents. In the Madras University too, the last Ph.D. study, made in 1961, is an experimental study of backwardness at the primary school stage.

The areas covered by different universities through their Ph.D. studies may reveal several interesting facts. The Ph.D. studies of Allahabad concentrate mainly on one area—personality and personality adjustment. Two studies deal with the philosophy of education. While the M.Ed. studies of Allahabad have comprehended almost all the major areas of educational research, the Ph.D. studies are concentrated on a few specified areas only. Studies in Benaras are concentrated mainly on the area of measurement. Out of the eleven Ph.D. studies, six deal with tests and test construction. But out of the 34 Ph.D. studies of Bombay only five deal with testing and measurement. Experimental studies are thus relatively very few. The bulk of the studies belong to the philosophical, historical and causal-comparative group. What Bombay has attempted is to cover many different areas even through their Ph.D. studies. There are doctoral researches on areas relating to measurement, vocabulary, curriculum, methods of teaching, philosophy of education, educational administration and the history of education. Of the five studies of the Delhi University, three deal with personality and adjustment. The doctoral theses of Lucknow University concentrate on educational planning and development. The studies are of socio-political and historical nature. Madras has turned out four studies and they relate to four different areas without any relationship. Of the nine studies done in Baroda, four deal with tests and test construction and the others with personality and adjustment, and philosophical and historical aspects. Nagpur's only study is on a really significant area—a predictive battery of tests for differential scholastic aptitudes, and the only study made in Poona is on the effect of supplementary diet on the physique of school children. The two studies done in Saugar are not experimental, as they bear on social and political aspects only.

The period of research which we have passed through is characterised by a process of finding one's way through an uncharted path, keeping in view the experiences of others using their tools and ideas. The pioneering adventurers were mostly individuals who moved on, alone, and preferred naturally to tread over only the beaten path. Problems were often selected at random and the approach was mainly fragmentary. Experimental studies were naturally few and even these were often marred by faulty sampling, ineffective research designs and unprecise measurement. Planning and co-ordination of research was well-nigh impossible under these conditions. We have moved far away from this situation today. Agencies like the U.G.C. and the N.C.E.R.T. have come forward to disseminate the findings of research

in the different universities. Committees have been set up in the N.C.E.R.T. to plan and co-ordinate research and even to finance and assist individual or co-operative projects. Co-operation in research may now become possible not merely between individuals in the same field, but between scholars of different disciplines. Increased facilities for research are becoming available with the help of the U.G.C. Tools of research are fast being forged within the country, which could be applied readily by research scholars in their enquiries, investigations and experimental projects. Mechanical data processing will soon become possible. With these developments a new era in educational research is bound to come. In fact we have already witnessed its dawn. When we review the research output in the universities for the period since 1961, clear evidence of this will be available. Remarkably good work has come out during the last few years, from many universities, some of which are only of recent origin. To enable scholars at the M.Ed. level to do real research, and not merely to acquaint themselves with research methodology by working on small projects, it is necessary to extend the course to a period of two years. If this is not possible, research in education worth the name, will be done only at the Ph.D. level in the universities. While perhaps reducing the output of research, this will help improving the quality of research. Sponsored research in the universities, which is now becoming common, will have to be used for expensive and prolonged studies. Co-operative research on a cross-sectional or longitudinal basis can be carried out only by a group of scholars who can tackle different aspects of the same problem, or conduct the same experiment on different samples or pursue the findings of previous groups of research workers. Their research studies, properly integrated, would add to our knowledge of the laws of behaviour in educational situations. More of institutional type of research and long-term research projects are necessary to adequately tackle complex problems in the educational field, and thus, build a communicable body of knowledge based on a common system of constructs.

The usual pattern of teachers training at the secondary level is to have graduates in Arts and Science for one year training in the secondary training colleges. After one year's stay, the would-be teachers get the B.T. or B.Ed. degree. The U. P. Government, however, is itself awarding the L.T. diploma for the same training. Gradually, however, secondary teachers' training is being taken over by the universities. It is expected that this will be achieved very soon.

There is, however, a trend to experiment with integrated content-cum-method courses of four years duration. The four regional colleges have been specifically started with the purpose of training teachers in shortage areas like science, mathematics and technology. The Kurukshetra experiment of a four-year training course after Matriculation is also worth examination. However, the fact will be that for a long time most of our requirements will be met by the one-year training courses.

The one-year course has been divided into two broad sections—Part I Theory and Part II Practical Skill in Teaching. The weightage in the shape of marks roughly works out to be $\frac{1}{3}$ rd for Theory and $\frac{1}{3}$ rd for skill in Teaching. Gradually, however, thinking on this aspect has been undergoing a change and the theory portion is being cut down to give a greater stress to the practical aspect. Many training colleges now have, at least one paper, quite an elaborate programme of demonstration lessons, criticism lessons and long practice which may take the shape of block practice as is usual in Punjab or it may be spread over a longer period, every trainee going to the practising school once or twice a week. Some other items like making of charts and other audio-visual aids etc., have also been added in some places. The regional colleges of education have brought the internship system to importance and in some universities also, like the Punjabi university, this pattern is being increasingly adopted.

The present duration of the B.T./B.Ed. training courses for teachers, however, is not sufficient for giving proper orientation to the recruits towards proper professional philosophy and technique. It is at the same time also felt that it may not be possible under the

present circumstances to increase the duration of the course to two years. The remedy, therefore, lies mainly in making the best use of the time available and to increase the actual working days and the daily working hours. This can, however, be done best in an institution of a purely residential nature which situation, however, cannot be enforced till the training colleges have complete residential facilities both for the staff and the students within the college premises.

The State College of Education, Patiala, has been sincerely striving to make this orientation as deep as possible within the limited time and resources available. I think the Punjab is the first State which has increased the number of working days in training colleges by cutting down holidays and reducing the period of summer vacations. Roughly training colleges in the State now work for about 237 days as against less than 200 days in other States. Even the recently started regional colleges work for 222 days a year. I propose a further increase in this period by reducing our Summer Vacations to six weeks instead of eight weeks, as we have at present. An ideal situation will be to have the training colleges as non-vacation institutions. The Education Commission have proposed 230 days.

I feel that there is need for some fresh thinking specially on the Theory side. Dead wood has to be removed and some fresh air allowed to come in. Theory may be given not more than 50 per cent weightage. The usual practice is to have five theory papers, of which one is on Teaching (General Methods and two teaching subjects). In some places they have an additional paper called 'Special Paper' including items like Basic Education, Adult Education, Physical Education and Special Methods of Teaching the various school subjects according to the candidates' own qualifications. The Jodhpur University has a system under which a person having the Master's Degree may specialise only in one subject unlike the degree holder, for instance an M.A. in English will take up Teaching of English and the Teaching of Higher English.

The latest Panjab University syllabus started only this year does away with the separate B.T. and B.Ed. (Basic) courses and presents an integrated B.Ed. course. I reproduce the outline for the benefit of my readers.

Part I (*Sessional work*)

- (a) Participation in seminars of topics such as Curriculum Construction, Evaluation, Basic Education and Health and Physical Education and Audio-Visual Education 40 marks.
- (b) Critical study of some aspects of the working of the practising school, such as the building, time table, staff and general tone. 40 marks.

(c) Community living. 40 marks.

1. Organisation of and participation in physical and cultural activities, educational trips and camping.

2. Social Service.

3. Improvement of the environment.

4. Behaviour in the community.

(d) Black-board Drawing and Painting 40 marks.

(e) Hobbies (Minor craft), 40 marks.

One of the following hobbies (only practical work) has to be taken compulsorily :

- (a) Craft Work, (b) Card Board Modelling and Book Binding,
 (c) Clay Modelling, (d) Toy Making, (e) Paper Machine,
 (f) Poultry Farming, (g) Floriculture and Kitchen Gardening,
 (h) Home Craft, and (i) Scientific hobbies.

Part II

Every candidate shall select one craft (with theory) out of the following (200 marks).

1. Cotton/Wool Craft
2. Agriculture and Gardening
3. Wood work
4. Art and Painting
5. Leather Work
6. Home Craft and Tailoring

Part III (Compulsory Theory Papers)

- | | |
|--|------------------|
| I. Theory and Principles of Education | 100 marks |
| II. Educational Psychology and Guidance | 100 marks |
| III. Current Problems of Indian Education | 100 marks |
| IV. General methods of teaching | 100 marks |
| V. School Organization and Administration | 100 marks |
| VI and VII. Teaching subjects, any two of the following :— | |
| Hindi, Panjabi, Urdu, Sanskrit, English, General Science, | |
| Mathematics, Social Studies, Commerce, Agriculture, | |
| History, Geography, Economics, Music, Biology, Physics, | |
| Chemistry, Home Science and Art. | 100 marks (each) |

Part IV

Practical work in the Skill in Teaching (200 marks)

Every student shall be required :

- to give a minimum of two discussion lessons ;
- to teach at least 50 lessons during the course of training ;
- to observe at least 20 lessons given by his classmates and others.

The teaching practice, a minimum of 50 lessons, shall be spread over one month so that every candidate attends his practising school for the whole of that period.

It will be seen that the sessional work and hobbies as well as craft work have been retained even in the integrated courses. I feel that such an inclusion is going to add to the total personality of the teacher.

This I feel is completely in line with the ideas of *work experience* and *productivity* as advocated by the Education Commission. Unless teachers themselves have an intimate acquaintance with 'work', it is idle to expect them to inspire their students towards such an approach. I am sure other universities will also give this problem some attention.

At the request of the President of the Indian Association of Teacher Educators, the Education Commission in collaboration with the Association appointed a Working Group to go through the existing B.Ed. and M.Ed. syllabuses and to prepare a model syllabus incorporating the latest ideas and developments in the field of Teacher Education.

The syllabi are suggestive in character and have not been considered in detail by the Education Commission. They have been worked out in the light of the general objectives of teacher education and the specific ones of each course. They embody some of the recent developments in education.¹

The B.Ed. programme has two areas : Theory and Practice ; Practice teaching including related practical work. The Theory part consists of following five papers :

- I. Foundations of Education : (Psychological) ; Educational Psychology including Evaluation.
- II. Foundations of Education : (Philosophical and Sociological).
- III. Education in India.
- IV. and V. Teaching of School Subjects (including content courses and teaching methods—two subjects to be offered).

1 NATE. *The B.Ed. Programme*. Delhi, 1966. Pp. 74.

For those interested, there should be provision for the study of one Special Field on an optional basis. Subjects offered under this should be related to school work. They may be as follows :—School Library Work, Guidance, Audio-Visual Education, and a selected art or craft.

Practice Teaching should include all aspects of a teacher's work. It should be continuous and should be preceded by observation of school programmes in selected schools under the guidance of experienced teachers. The Demonstration School of the Training College should also be utilised for this purpose.

Practice teaching should be of a continuous nature extending over 8—10 weeks in which students would be associated as regular staff members with school, teaching at least two periods per day and participating activity in the school programme as a whole.

The following items are included under practical work related to practice teaching :

1. Observation of lessons by experienced teachers and staff of the college.
 2. Planning units and lessons.
 3. Discussion of lesson plans and Unit Plans and lessons given (Criticism lessons).
 4. Organisation of the participation in co-curricular activities.
 5. Setting follow-up assignments.
 6. Evaluation in terms of educational objectives, use of teacher-made tests; administration of standardised scholastic achievement tests.
 7. Black-board work.
 8. Practical work connected with school subjects.
 9. Preparation and use of audio-visual aids related to methods of teaching.
 10. Experimental and laboratory work in Science, Home Science, Geography and other subjects needing such work.
 11. Study of the organisation of work and activities in the school.
 12. Observation and assistance in Health Education programme.
 13. Observation and assistance in the guidance programme and maintenance of cumulative records.
 14. Techniques of teaching large classes.
- The total marks will be 900, out of which 500 will be Theory and 400 for practicals.

It will thus be seen that there is a tendency to reduce the number of papers and the scope of the theory part. The main casualties of this 'MODERNISM' are School Organisation, History of Education and General Methods. Attempts are made to include some items from the same in the main papers, but I am quite sure much of what I consider good is left out. I would, therefore, plead for rationalizing of the Theory papers. Some of my friends agree that many things can be taught incidentally and need not be put in the syllabus as such. We should not leave very much to the imagination of teachers and the taught. This is also my experience that whatever is not examined is not taught. The dead wood must be removed but certainly a lot of useful material needs to be added to the theory side to give good background to the trainee.

As far as the papers on teaching are concerned, there has been a lot of controversy. Many educationists want to completely do away with the portion on general methods. I am an earnest advocate of this aspect. We may have it as an independent paper or as part of a paper.

Some people are in favour of including some subject content. I feel that the training colleges are not meant to remedy the wrongs of the degree colleges and the universities. Of course, if we have some arrangement for remedial work, it should be just sufficient. I also feel that if a trainee takes his teaching work sincerely, his content side will be automatically brought up-to-date.

While preparing a programme of theory papers, care has to be taken that only those topics are included which may help future teachers :

1. To develop interests, attitudes, and knowledge which will enable them (i) to foster the all-round growth and development of children under their care, (ii) to provide guidance to individual pupils ;
2. To develop an understanding of the aims and objectives of education, in the Indian background, and to promote an awareness of the role of the school and the teacher realising these aims and ideals ;
3. To develop an understanding of the close relationship between society and the school, between life and the school work ;
4. To help future teachers to develop competence to teach subjects of their specialisation, on the basis of an adequate theory of learning and a sound knowledge of the subject; and
5. To build up a professional consciousness.

Rigid uniformity, however, is not necessary. Experimentation may go on according to local requirements and conditions available.

The Punjab scheme, however, seems to be full of developmental and experimental potentialities. The teacher educator must have an open mind and share experiences and views with fellow workers occasionally.

The *methods of teaching* will also go a long way in creating a right sort of impact on the trainee. More lecture method is not in a position to deliver the goods. Discussion, tutorial and seminar work and above all self-study in the library are to be increasingly emphasised. Informal programmes like extension lectures, declaration contests, dramatics and visits to places of educational interest can also be very helpful. Modern media of education like the radio, the television and programmed learning are also worth trying. Constant research has to go on in this direction so that the experience and skill part of education could be put in the fore-front.

Practical Work

Regarding practical work, it may be noted that the recommendations of the University Education Commission as well as those of the Mudaliar Commission and the National Education Commission lay a lot emphasis on this aspect of teacher education. It is good that there is an increasing recognition of this fact. Many progressive institutions are fast developing their own programmes to meet this felt need. The model syllabus already referred to has good outline provision which an individual institution could use as the base.

As far as teaching practice is concerned, a lot of improvement is needed. This is usually not taken rather seriously. There is need to streamline this side of training. More and more opportunities to observe lessons must be given to the trainees. The number of criticism lessons must be increased from the customary two. The number of practice lessons has to be doubled from the present 40 or 50. Continuity in practice teaching is very necessary as available in internship system.

Proper guidance and supervision is again lacking and has to be provided in increasing measures. A system of co-operating schools and co-operating teachers has to be evolved and more and more responsibilities given to senior and experienced teachers in schools in the matter of supervision. Efforts have to be made to give teaching experience in normal conditions.

Some people suggest that some sort of post-training apprenticeship system may give a good polish to the trainees as in the case in medicine and engineering. They suggest that a trainee may be required to work on a small allowance as an apprentice teacher in a recognised school for a period of about six months before he is given the degree. The idea could be studied as a pilot project in one or two smaller units like the Panjab and the Jodhpur universities. Two questions that come to my mind are (i) who will meet the cost ? and

(ii) what will be the relationship between the parent training institutions and the schools some of which may be very far away?

Sessional work is another good innovation. If properly carried out, it could be very useful. There is, however, a great danger of non-seriousness creeping in, as this aspect will have to be assessed completely internally. What sort of programmes could be included is yet another problem to be studied. At Patiala College we introduced items like defence activities and community living in the programme. The Central Institute of Education, Delhi, included: (i) Visual Education and Craft Projects, and (2) Co-curricular activities in their scheme. Many useful items are included in the modern syllabus. The study of the school plant, children's case studies and examination of the subject syllabi could be included as useful items. This is a new concept and has to be worked with due care and caution.

The question of Evaluation in Teacher Education is very important. Newer techniques and tools are now available, and some of them are being used at many places. The traditional external system, however, seems to be mostly prevalent. Only in teaching practice, some internal assessment exists. The Panjab and the Punjabi universities are perhaps the only universities where internal assessment equal to 50 per cent exists even in the theory papers. The model B.Ed. syllabus referred to above suggests the following :

Part A

	External (Written Examina- tion)	Internal (Sessional)	Total 500
Theory (five papers)	375	125	500

Part B

Practice Teaching and related Practical Work	Practice Teaching	(Practical work related to Practice Teaching)	Total
	200	200	400

Passing and award of classes should be separate for each part. The grading may be as follows :—

I Class	II Class	III Class
60 per cent and above	50 to 60 per cent	40 to 50 per cent

Under each paper 25 per cent marks should be allotted for internal assessment of work, which will include Sessional and related Practical work.

The above provides a good arrangement but much will, however, depend on how far are the colleges able to make their assessment objective and broad-based. All types of media like periodic test, assignments, oral tests, participation in discussions, short answer tests, etc., must be used. Due weight has to be given to attendance and library book. The stress has to be spread all over the syllabus as well as all over the period of training. The correlation between the external and internal is to be positive. In practice teaching and in practical work, however, internal assessment will play a more important part for obvious reasons. In fact, under these items real assessment can be made mainly internal.

Effective assessment of practice teaching helps in not only improving and enriching the practice teaching programme of training colleges. Ineffective and half hearted assessment leads to mechanised routine in practice teaching.

Effective assessment implies that all staff members and supervisors are aware of good criteria and understand their implications in class-work. It also implies the need for a practicable method of rating and recording the assessment. These have to be put together in some form so as to help meaningful interpretation of the grading. A search for better methods should always be on.

Effectiveness of Training

What about effectiveness of training? It is often asked whether the stay in a teacher training institution does really bring about some useful orientation in the would-be teachers. The 'acid test' of teachers training, therefore, lies in how far the trained teachers prove effective in the actual classroom and school situation. Although no authentic investigation in this direction is available, the general opinion so far gauged is that much of what is taught in a training college is neither worth practising nor is actually practised in schools; and nothing much, if at all, is carried over to the field. Some optimists, however, do believe that some small skills and habits like the use of black-board, questioning, pre-planning of lessons may persist in the newly trained persons at least for some time eventually to die a natural death in uncongenial atmosphere.

As a rule the general academic background of the persons who offer themselves for training is inadequate and most of them come to the training colleges in a mood of frustration and disappointment. The reasons are not far to seek. It is a job to kindle their interest in the profession. The greatest problem before us today in this country is how to attract talent. Until and unless this is effectively solved,

we should continue to have the dismal prospect of training colleges sending out indifferent and disinterested teachers to schools.

Quite often, too, the physical facilities in our training colleges are in a state of paucity, neglect and disrepair. Often even the ordinary facilities like a good library, classroom, craft-rooms and audio-visual aids are on a discount. Careful scrutiny will have to be taken in hand to eliminate sub-standard institutions.

The curricula and syllabi in our training institutions, as are prevalent today, are usually lop-sided and theory ridden and often fails to strike a balance between acquisition of techniques and the development of a teaching personality. The proverbial gap between theory and practice continues to dominate.

The whole training programme hinges, as stated above, on final examination of routine and essay type. This leads to a complete defeat of the philosophy behind a professional course and results in short-cut methods, cramming and the like.

The remedy, therefore, lies in close diagnostic studies of the points raised above leading to suitable remedial measures like:

1. There should be a close liaison between the training colleges and schools in the surrounding areas so that the charge that training college staff live and work in ivory towers gradually loses force.
2. Another improvement that could be suggested is that training college staff should have had school experience before joining the training colleges.
3. There is, I feel, an urgent need for creating a strong, specialised cadre for teacher educators in every State. It is also desirable that some sort of pre-job orientation must be available for persons who opt for this cadre with provision for constant in-service education to keep them abreast with changes in the school situation.
4. It is necessary that a study of the syllabus followed at the relevant school stages is made an important part of the training courses. In teaching subject areas also a thorough study of the relevant syllabus should be a 'must'.
5. The internship in teaching scheme, if introduced, may succeed in giving to the trainees an idea of the needs of the schools and of the actual conditions available there.
6. It is common knowledge that most of the teacher educators continue to rely upon traditional, ineffective methods like

lecturing and dictating notes. There are no opportunities for thinking, wide reading and discussion. Paradoxically it is also true that in actual experience, the methods have proved very helpful to pass the qualifying examinations and to obtain diplomas and certificates in teaching. As long as, therefore, the stress on the present type of examination continues, there seems to be little hope of any renewed enthusiasm, for newer and better methods of teaching on the part of teacher educators and teacher trainees.

7. A research corner, a curriculum development laboratory and a guidance corner could be additional facilities in the institutional plant, where trainees during the later part of their training be encouraged to study actual problems confronting education in the various areas think out remedies.
8. The training college should also be a sort of community centre for teachers in the locality and the surrounding area. Extension work should be made an integral part of every training college and arrangements should exist 'to adopt' a few schools in the vicinity.
9. It is common knowledge that conditions in schools are not usually conducive to good teaching. Schools suffer from numerous handicaps. The trainees, however, remain absolutely ignorant of all this during their training and there is no attempt at acquainting them with the same during their training period. The first requirement, therefore, is that the training colleges should take every step to study the school conditions and to acquaint their students with the same with a view to minimising their rigour later on. Training must be given, keeping in view the existing conditions in the schools and not only for ideal conditions as is the case at present.
10. The training curriculum should be flexible so that necessary adjustments and additions could be made as and when needed within the existing framework.
11. To give a touch of reality to the training, it is suggested that a seven-day conference on 'Know the School Problems' be arranged as the last item of the course in training colleges after the final examination. This meet should be jointly attended by the trainees, and a few experienced headmasters and selected teachers from both urban and rural schools. The training college staff should act as observers. The idea behind such a conference is to acquaint the students with the actual problems in the field, some of which they must have experienced, during internship, and initiate some thinking towards their solution.

While concluding, I would like to repeat with added force that any real progress in teacher education programme can only be made at the institutional level. There is much scope for work. We have to so vitalise our teacher training programmes that those who join the teaching profession may be trained to pull their full weight. The training should have a deep impact on the minds of the trainees.

INTRODUCTION

It has been reported that there are more than one lakh untrained teachers in secondary schools and almost four times that number among teachers in primary schools in our country. Various measures have been devised to clear this backlog of untrained teachers in our schools. Some states and some universities have started short-term or vacation courses for this purpose. For instance, in Andhra Pradesh, two training colleges run a short-term Bachelor of Education Course of a duration of five months. In Madras, there is a short-term course of four months. The University of Jodhpur runs a two-year Vacation Course for training the teachers. In Uttar Pradesh, in-service teachers training courses of three months' duration have been devised.

A very bold step was taken in 1966—a year ago, to start Correspondence Courses for the training of secondary school teachers in India. The Courses were started in the Central Institute of Education, Delhi, and the four regional colleges of education situated in Ajmer, Bhopal, Bhubaneswar and Mysore. The Ministry of Education is planning to start such courses in two more universities, Baroda and Calcutta, during the current year. The State Institute of Education, Rajasthan, will soon be starting a correspondence course for the training of primary teachers.

These courses have been recommended by some experts only as an emergency measure with the specific purpose of clearing the backlog of untrained teachers. There are some others who recommend them as useful techniques for in-service education, for continuing education and for further education. They have been recommended from the point of view of being inexpensive as well as being measures by which maximum use of all the resources of the training institutions may be made. It should be clear that the courses are not a substitute for the regular pre-service professional teacher training courses, and also that the schemes as devised do not visualise training by correspondence alone. There is scope for plenty of contact programmes in these schemes.

The idea of education through correspondence got an impetus from a committee headed by Dr. Kothari, which recommended correspondence courses for university education. The University of Delhi established a Directorate of Correspondence Courses which has been doing useful work in running the courses for undergraduates. Later, a study team was set up by the National Council of Educational Research and Training on the advisability of correspondence courses for teacher education. This committee gave a detailed scheme for such courses. The Indian Education Commission also in its report in 1966, has recommended that steps may be taken to train the untrained teachers in schools through correspondence courses. And, like many others, it has warned that the standards should not deteriorate.

Main Features

The main features of the correspondence courses as stated last year are the following :

1. The duration of the course is longer than that of regular teacher education programmes. In the regional colleges, it will be of about 14 months and in the Central Institute of Education, it will be of 16 months, while the regular teacher-training programmes are of one academic session of about 10 months only.
2. The educational qualifications for admission to the course are the same as those for the regular courses. But the candidates have to be experienced teachers working in recognised educational institutions. In the regional colleges the minimum requirement is five years' teaching experience while in the Central Institute of Education, it is three years.
3. The successful candidates at these courses will get the degree of Bachelor of Education from the universities with which the colleges are affiliated.
4. The syllabi are identical with those of regular training programmes.
5. There is an elaborate contact programme for the students of these courses. In the regional colleges, the students are expected to spend two summers at the Summer Schools of six weeks each. In the Central Institute of Education one Summer School of eight weeks is required. In addition, the students attend lectures on Sundays and other holidays.

The teacher training programme for graduates is usually of one year. The course has two clear-cut parts : Part A—Theory and Part B—Practical Work. The Practical Part is further divided into two parts :—(a) Sessional Work, and (b) Practice Teaching.

In the courses through correspondence, the sessional work and practice teaching are not covered by post. Most of the work required for the sessional practical work is done in Summer Schools. This work includes plenty of assignments like preparing audio-visual aids, doing some psychology practical work, organising and participating in co-curricular activities, craft work and physical education, attending tutorial meetings and writing certain essays for the tutor, preparing objective type tests and administering them to their students, etc. The instruction about this programme is generally given during the Summer School and other contact programmes. Most of the assignments also are generally done under supervision during that period, but some assignments are done in actual school situation and are submitted later on.

The Practice Teaching

The practice teaching is an essential part of all teacher education programmes in the country. Each student has to take a number of lessons in some school in the area covered by the training institutions. The lessons are fully planned, discussed and supervised by the training college personnel. Besides, the students are also required to observe and make detailed notes of their observation of the classes of some teachers in the schools where they do practice teaching. The students are also given an opportunity of seeing some lessons given by training college personnel or some experienced teachers. These lessons are usually called demonstration lessons.

In order to maintain the standards, the correspondence course students also are given the same types of experiences. Their usual teaching in their classrooms is regarded as their practice-teaching. They also write detailed lesson plans of the number of lessons required by the universities. They are given instructions regarding how to plan their lessons. Some of their lesson plans are discussed with the experts in their subjects. Demonstration lessons are held for them and discussed by them. It has been found that the discussion of these demonstration lessons is much more realistic and lively with these groups of students than with the regular ones. The reason is obvious. These teachers are in the field and they know what will work in the school and what will not. They are occasionally required to visit the training college and report about their progress in classroom teaching. They are given proformas and outlines of what they should observe in a teacher's lessons. They make a detailed record of the observations that they make.

It is the supervision of their lessons that creates real difficulty. The Central Institute of Education is in an advantageous position in this regard, as it has confined its course to teachers teaching in Delhi schools only. The principals of the schools in which the students are employed as teachers are essentially considered their supervisors. In addition, the personnel from the Institute also visits the schools and supervises them.

The problem is more acute with the scheme in the regional colleges. They recruit teachers from a larger part of the country. They appoint local supervisors who are normally either lecturers in a training college near the school in which the teacher is employed or are educational administrators working nearby. The Central Institute is able to organise meetings of the principals/supervisors as they are all local people. They are also given detailed guidance by the Institute regarding how and what to supervise. The regional colleges can contact the supervisors of practice teaching only through correspondence. The supervision is thus done with the cooperation of the school authorities, the local educational administrators and the training college staff.

As has been mentioned earlier that it is only the theoretical part of the course which is done through correspondence. The syllabi in the theory normally include the philosophical, psychological and sociological foundations of education as well as the history of education, school organization and health education courses. In addition to this core programme, the students have to select two school subjects—methods of teaching which they have to specialise in. Besides, the Central Institute of Education requires the pupils to select and study one subject from a list of subjects like school library organisation, organization of co-curricular activities, physical education, education of the backward children, audio-visual education, etc.

The Central Institute covers apart of this the oretical course during the Summer School. The part covered is mainly the programme on the Methods of Teaching school subjects. The regional colleges of education cover this part as well as some other parts of the theoretical course in Summer Schools.

The rest of the course is covered through an extensive programme of correspondence. Correspondence lessons are sent to the students by post. These lessons may be of varying patterns. For instance, a lesson may contain the material in form of points only or it may have detailed exhaustive material. However, the usual pattern followed in our country for the teacher training course is the following : The main body of the lesson is in the form of a detailed discussion of the significant aspects of a topic. This is followed by a short specific list of readings suggested to the students. Then there are two sets of questions. In the first set questions are given for self-check by the students. The second set consists of questions, which require written answers from the students.

The success of the instructional programme through these lessons depends very much on the quality of these lessons. The lessons are written by experts in their fields. The whole syllabus is first divided into suitable units by those who have been teaching that area to the Bachelor of Education Course students for a considerable period. The

lesson writers are then requested to plan out their scheme of writing these lessons by adopting or modifying this break-up of the total syllabus into suitable units. The lesson writers have generally divided the syllabus in about 32 to 35 lessons for each paper. After the lessons are received from the lesson writers they are edited by experts and then got ready either in a printed or mimeographed form for use by the students.

These lessons are sent to the students according to a regular schedule with regular periodicity. The students' written answers are expected from them within a certain period. These written answers, called students' response sheets, are corrected by the staff of the training colleges. These corrections are edited and then the response sheets are sent back to the students. While correcting them, constructive suggestions are usually made. The students are either asked to refer to certain reading material or to that portion of the lesson itself where he should get the answer or they are asked to think and reflect a little more and then answer. The students are encouraged to write about their difficulties in regard to the material covered in the lesson. These are also answered to the students in writing.

In this way the teaching learning situation through correspondence is created. It can be seen that this results in the students writing a number of compositions and then getting individual guidance, though through correspondence.

In the Central Institute of Education, where the students are recruited from Delhi, only occasional meetings and seminars, etc., are organised on Sundays. During these meetings, the students' difficulties regarding the theoretical part of the course are also clarified.

It would thus be evident that care has been taken in the schemes of these courses that the standards are not diluted and that the students of these courses go through almost the same types of experiences as the regular teacher trainees do.

Evaluation

The schemes of evaluation differ from university to university. The evaluation of the students is mostly internal. The practical work is entirely internal, assessed on the basis of the assignments the students submit. The skill in practice teaching is assessed by the supervisors in the regional colleges and by a system of internal and external assessment in the Central Institute of Education. The internal assessment of the skill in practice teaching is done by their principals and the training colleges staff who have supervised them, keeping in view the regularity of their work, quality of their lesson plans and the quality of the execution of these plans. Their principals are given detailed proformas in which they report their assessment twice in the session. Besides, the University appoints examiners for a formal examination of their lessons—one each in the two subjects.

The scheme of evaluation of the practice-teaching is the only aspect in which the Correspondence Course differs from the programme of regular courses, as for the regular programme the assessment of practice teaching is done entirely internally.

The Theory Part of the Course is assessed on the basis of the regularity of their responses to the lessons, the quality of those responses and the indication of their having done some reading beyond what has been given in the lesson.

Of the scheme of Correspondence Courses for teacher education in the country, the description given above is more of the Central Institute of Education than that of at other places, but the broad features of the schemes are more or less the same with slight changes and modifications.

It should be evident that these courses are not going to effect regular teacher education programmes adversely. The regular teacher education programmes are essentially pre-service while these are in-service. If anything, these courses should help to reorient the thinking of the educationists about teacher education programmes. They should become more realistic because of the feed-back from these teachers who are experienced and who have intimate knowledge of the class and the children with whom they work. Moreover, it can be said that with due care and caution the standards of achievement in teacher-education can be maintained even through these programmes. A teacher education programme usually aims at giving certain knowledge, some skills—manual and intellectual, certain attitudes and some personality development. The knowledge objective may be achieved quite successfully, in a way, better than that in regular teacher education programmes where the general technique of giving knowledge is through lectures. The skill objective is partially achieved by the various aspects of the Courses. The achievement of the objectives of building attitudes depends on the type of contact programme, supervision and guidance that a training college is able to give. The attitudes and personality traits can be modified in a healthy manner if the tone of the programme is serious and efficient.

The success of a correspondence course depends very much on the quality of lessons that are prepared and the motivation that the training colleges are able to build up. It is important that the students be motivated to plenty of self-study and in addition it is important that they have access to books and other reading material. The schemes in our country have kept this in mind and an attempt has been made to enthuse the students to self-study and to make plenty of useful reading material available to them.

It is too early to assess the value or measure the success of Correspondence Courses for Teacher Training in our country. The great need for such courses in the present circumstances is evident. But whether it would be good to continue them as devised at present, or to modify them considerably, or to end them once the backlog of untrained teachers is cleared, only time will show.

J. C. Banerji

(Legacy of Parallelism)

INTRODUCTION

Basic Education is much under fire today and the air is thick with the cry that basic education has failed. And the failure is believed to be due 'mainly to lack of proper human material'¹—which means the teacher factor in the final analysis. The teacher retorts, perhaps with some justification, that the fault lies not with him but somewhere else—may be with the administration that never made any honest try to implement the basic scheme, or may be with basic education itself which, besides leaving the academic foundations vague and undefined, did set for him such ambitious socio-economic and spiritual goals as are ordinarily beyond his power to comprehend, let alone achieve in daily work. It is common knowledge that basic education was ushered in the country in a climate of heated controversy and right from the beginning two streams of thought were discernible in regard to its fundamental theories and goals. The first school, affiliated ideologically to Gandhian thoughts and beliefs, put much emphasis upon the technique of correlated teaching and sought to remain steadfast to the productive aspect of craftwork and the doctrine of self-support. The other school, representing the professional educators in general, interpreted craftwork as a form of creative activity and insisted that it should have an important place in child education primarily not for any economic objectives, but for enlivening child education with the introduction of work and playway methods. So the argument went on. But when adverse criticism is made against the teacher, the institutions responsible for the education and training of basic teachers can hardly escape the share of blame that is their due. The negative aspect of the debate however is that while the rising chorus of criticism continues to obscure the future of basic education, little or no grassroot thinking is applied to ascertain whether basic education has failed at all, and if so why. So before outlining the objectives and organisation of a postgraduate basic training college as it is run today, it is pertinent to have a look-back and point out how a parallelism in the theory of basic education has weakened its foundations and consequently confused the functioning of training colleges and basic teachers over all these years.

1. Dr. K. L. Shrimali. *Rajya Sabha Speech as reported in the Amrita Bazar Patrika*, Calcutta. May 3, 1963.

From Wardha to Delhi

It is now a matter of history that rumblings of dissent and controversy could be heard in the very first conference at Wardha in 1937 when Gandhiji in his inaugural address declared :

...the scheme that I wish to place before you is not the teaching of handicrafts side by side with liberal education. I want the whole process of education to be imparted through some handicrafts or industry.¹

Continuing further he said :

The extent to which we can make it (basic education) self-supporting will be a test of its efficiency.²

Twenty days before the conference Gandhiji summarised in the *Harijan* in the clearest possible terms what he considered to be the core of basic education :

1. Primary education, extending over a period of seven years or longer, and covering all the subjects up to the matriculation standard, except English, plus *a vocation used as the vehicle for drawing out the minds of boys and girls in all departments of knowledge*, should take the place of what passes today, under the name of Primary, Middle and High School Education.³
2. Such education, taken as a whole, *can and must be self-supporting ; in fact, self-support is the acid test of its reality.*³

Basic education as conceived by Gandhiji is thus characterised by two distinguishing features : (a) the linking of knowledge contents to crafts or the technique of correlated teaching, and (b) achievement of self-sufficiency in the school. A basic school was thus to become not merely a seat of learning but a centre of production too, a child not only a learner but a producer and the teacher not merely a scholar but a craftsman as well.

Academicians present at the conference struck a different note. Dr. Zakir Hussain, then Principal of Jamia Millia Islamia, remarked.

Mahatmaji thinks that the scheme which he has placed before you is absolutely original ...But those who are working in the educational field will not find Mahatmaji's scheme very

1. Hindustani Talimi Sangh. *Educational Reconstruction*. Sixth Edition, Sevagram, Wardha, 1959. P. 50.

2. *Ibid.* P. 51.

3. M. K. Gandhi. *Basic Education*. Ahmedabad : Navajivan Publishing House, 1956. Pp. 46-49.

new. They know that true learning can be imparted only through doing... Many educationists have, therefore, been trying to make some manual work the centre of education. In America this method is called the Project Method and in Russia the Complex Method.¹

As regards correlated teaching and self-supporting aspect of basic education, Dr. Zakir Hussain's remarks were equally forthright :

But the greatest difficulty in carrying out the scheme will be the scarcity of trained teachers. If we have to teach all the subjects through the *takli*, we cannot pull on with untrained teachers. I myself am a teacher ; but *if I am asked today to teach all subjects through spinning I shall have to face great difficulties.*

Wherever the experiment has been tried, it has not been possible to make education self-supporting. . . . In America Prof. Dewey had a similar plan, which was welcomed enthusiastically, but he had to close down his school after a few years . . . there is a danger in overemphasising the self-supporting aspect of education. *Teachers may become slave-drivers and exploit the labour of poor boys. If this happens, the takli will prove even worse than books.*² (*Italics ours*)

Prof. K. T. Shah remarked that 'the evil of overwork and undue extraction of labour from the students will silently but surely creep in and the real aim of education will recede into the background'.³ The Education Minister of Orissa expressed fear that 'education may be sacrificed for a mechanical outturn. . . . Long hours of work and a rub between the parents and the teachers may be necessary consequences of such a course'.⁴

The Wardha Conference no doubt adopted, *inter alia*, a resolution to the effect 'that this system of education will be gradually able to cover the remuneration of teachers'.⁵ But it is highly significant that this resolution was not accepted by the Haripura session of the Indian National Congress in March, 1938. At Haripura only three resolutions were accepted and these dealt with universalisation of elementary education, acceptance of mother-tongue as the medium of instruction and the inclusion of a manual and productive type of work in the school curriculum. The Hindusthani Talimi Sangh was no doubt set up, but the controversial issues raised at the Wardha

1. Hindusthani Talimi Sangh : *op. cit.*, P. 53.

2. *Ibid.*, pp. 53-54.

3. *Ibid.*, p. 56.

4. *Ibid.*, p. 76.

5. Ministry of Education, Government of India : *Syllabus for Basic School*. Delhi, 1956. P. 2.

Conference remained unsolved. The consequence was that right from the beginning basic education started its limping journey through a crossfire of 'education' and 'production'.

The controversy was further heightened when the Central Advisory Board of Education stepped in, and the Kher Committee, appointed under its auspices to examine the Wardha scheme, accepted :

1. the principle of *education through activity*,
2. pointed out that this activity should be of *many kinds in the lower classes* and should only *later on lead to a basic craft which will produce saleable articles*, and
3. concluded that basic education *should first be introduced in rural areas*.¹

Thus the emphasis shifted from 'productivity' to 'creativity'. While 'activities of many kinds' were to be introduced in the lower classes, 'productive craft' would have their place 'only later on' in the upper classes. Not only this. Basic education was further downgraded and made to look suspect before the rural people when it was suggested that it should be introduced only in the rural areas to begin with.

The argument went a step further when the Central Advisory Board of Education in 1944 concluded as follows :

The main principle of learning through activity has been endorsed by the educationists all over the world. At the lower stages the activity will take many forms, leading gradually up to a basic craft. . . . The Board. . . are unable to endorse the view that education at any stage and particularly at the lower stages can or should be expected to pay for itself through the sale of articles produced by the pupils.²

As a result of this recommendation there remained little difference between basic education and activity-centred child education as evolved in other lands. It is highly significant that 'almost all the State Governments included Basic Education in their Five-Year Educational Development Plans *prepared in the light of the recommendations of this Report* and began to implement it from 1946-47'.³ (*Italics ours*)

While the Sargent Report under official seal served to make basic education fall in line with the modern system of child education,

1. *Reports of the Committee appointed by the Central Advisory Board of Education*. (1938-1943). Pp. 9-10.

2. Bureau of Education, India. *Post-War Educational Development in India*. Delhi, 1947. P. 7.

3. Ministry of Education, Government of India. *Syllabus for Basic Schools*. Delhi, 1956. P. 4.

the Hindusthani Talimi Sangh sought to widen the scope and concept of basic education in their own way. Mahadev Desai had already spoken of non-violence during the Wardha Conference (1937) :

The idea of self-supporting (basic) education cannot be divorced from the ideological background of non-violence. . . . We should approach the task (of basic education) with firm faith in non-violence and in the belief that the new scheme is evolved by a mind that has conceived non-violence as the panacea for all evils.¹

Now during the Third National Education Conference at Wardha in 1945 Gandhiji declared :

1. Nai Talim means 'education in all stages of life from cradle to grave through manual work and rural handicrafts',
2. Since the scope of basic education was extended, a basic school teacher must consider himself a universal teacher, and that
3. Nai Talim is 'not dependent on money. The running expenses of this education should come from the educational process. Whatever may be the criticisms, I know that the only true education is that which is self-supporting.'²

It is worthwhile to remember in this connection that in 1949-50 nearly 90 per cent of our primary teachers were non-matriculates. In 1960-61 the figure stood at 64.1 per cent.³

The Concept of Basic Education

The Concept of Basic Education. Published by the Ministry of Education, Government of India (1956), while maintaining significant silence on the crucial question of self-support, dealt with the issue of correlated teaching and stated that 'the well-trained and understanding teacher should be able to integrate *most of the knowledge* that he wishes to impart. . . . If he is not able to do so, it either means that he lacks the necessary ability or that the curriculum has been burdened with items of knowledge which are not important and significant at that particular stage.'⁴

Dr. K. L. Shrimali's article *Basic Education in the Machine Age* in the *Handbook for Teachers of Basic Schools* published by the

1. Hindusthani Talimi Sangh, *op. cit.*, Pp. 80-81.

2. Hindusthani Talimi Sangh. *Seven Years of Work* (1938-46). Sevagram, Wardha. Pp. 24-27.

3. National Council of Educational Research and Training. *The Indian Year Book of Education*. New Delhi, 1964. P. 675.

4. Ministry of Education, Government of India. *The Concept of Basic Education*. Delhi, 1957. Pp. 2-7.

Ministry of Education, Government of India in 1956 threw some refreshing light on the subject. But this served the purpose of a guideline more or less to individual worker and did not set all controversies at rest.

The Assessment Committee on Basic Education that was ideally timed to salvage basic education from confusion and misunderstanding failed to find out a rationale of basic education for general acceptance, and made comments which tended to sharpen the controversy. The following excerpts are relevant :

On Interpretation

"We found...that Basic education is interpreted in various ways even by people in high authority. . . . Fanciful interpretations, however, do not help at all. Unfortunately, too many people have too many fanciful interpretations.

"We had the impression that in Uttar Pradesh, for instance, productivity is deliberately understressed and neglected in Basic schools and by laying down that the alternative to 'productive activity' is 'creative activity'. Basic education is in the process of misinterpretation and misdirection in West Bengal".

"... If productive work in Basic education is negatived or cast aside, something which is fundamental to Basic education is in danger and what remains can easily become a caricature of Basic education".¹ (*Italics ours*)

On Productive Work and Correlated Teaching

"Productive work occupies a central place in the whole programme of Basic education. A good part of learning must be correlated. . . in various processes of productive work. While productive work is important as such, in Basic education it is more important as the vehicle of learning."² (*Italics ours*)

On Self-sufficiency

"There is no doubt that originally Gandhiji thought of self-sufficiency as something which should meet the recurring expenses. . . from income derived from productive work. But Gandhiji . . . explained later that. . . society or the state should provide land, buildings, equipment, raw materials, guidance, supervision, etc., and the teachers and pupils working together will constitute a cooperative family producing and using for

1. Ministry of Education, Government of India. *Report of the Assessment Committee on Education*. Delhi, 1956. Pp. 6-7.

2. *Ibid.* Pp. 38-39.

themselves what they need for food, clothing and other essential requirements of life".¹(Italics ours)

It will be evident that this statement left the old question of self-sufficiency in school as vague and undefined as ever.

While considering these statements of the Assessment Committee, it is relevant to recapitulate the observation made earlier in another publication of the Ministry of Education, Government of India :

It (basic education) was, however, received with mixed feelings. Some educationists were suspicious and felt that the schools would become small factories with compulsory child labour. Others recognised in this system the principle of 'learning by doing' already advocated by educational thinkers like Dewey and Kilpatrick. This principle, in fact, was not new to the educational world. In India this idea had been worked out by Tagore in his school since the first decade of the century. *Gandhiji was, however, the first to apply it on a nationwide scale. (Italics ours)*

It seems some heart-searching was done at the time of embarking upon the *Orientation Programme* and introducing basic activities in non-basic schools. It was admitted that the 'compact area method' had resulted in a few 'basic islands' in the vast 'non-basic sea', the latter engulfing the former. And then basic education was sought to be defined in a new way. Here also it may be seen how the definition shifted from Gandhiji's original stand. At the Wardha Conference a question came up as to the future of the existing primary and secondary schools, once the basic scheme was implemented in full swing.² Gandhiji said :

After considering my proposals a question arises : Shall we close down the present primary and secondary schools ? I have no hesitation in making an affirmative reply.³

It becomes clear that Gandhiji did not believe there was any common meeting ground between basic and non-basic education. Otherwise how could he unhesitatingly suggest closure of all primary and secondary schools ? And Shri G. Ramachandran, while clearing some misconceptions about basic education prior to the *Orientation Programme* said :

Let us present *Basic education as improved elementary education* and frighten nobody by saying that Basic education is meant

1. Ministry of Education, Government of India. *Report of the Assessment committee. Delhi, 1956.*

2. Government of India, Ministry of Education : *Syllabus for Basic Schools*, Delhi, 1956. P. 2.

3. Hindusthani Talimi Sangh : *Educational Reconstruction*, Sevagram, Wardha, 1956. P. 88.

to uproot or throw away what is going on in elementary education. . . . Let no one create the impression that Basic education must grow in total hostility to elementary education as it has developed.¹ (*Italics ours*)

So basic education is defined as 'improved elementary education'. This definition no doubt marked a landmark in the evolution of the theory of basic education and brought it for the first time within the level of aspiration of the common teacher.

It is only recently, however, that opinions on the controversial aspects of basic education are being voiced forth without any side-tracking or equivocation. Shri Vinoba Bhave is of the opinion that income derived from the sale of articles produced by the pupils should not be used to minimise educational expenditure. In an address to the Second National Seminar on Basic Education in January, 1958 he declared that it is the responsibility of the state to finance education up to the age of fifteen and hence the idea of supporting schools through a system of productive education is superfluous. Shri T.S. Avinashilingam has recently written :

At the time this idea (self-supporting idea) was put forward, there was a foreign government which was not prepared to spend the needed amount on education. With independence, the position has changed. The State has now assumed the responsibility, under a specific Article of the Constitution, to provide compulsory and universal education for the children in the age-group 6—14. In view of this, though basic schools emphasize that crafts should be done efficiently, *the need to be self-supporting through craftwork does not exist any more.*² (*Italics ours*)

Much of the confusion and misunderstanding about basic education and the consequent harm done to it could be avoided and the colossal expenditure on craft equipments and materials put to better use, if the basic teachers and training colleges knew earlier that the theory of production and self-support—so pontifically proclaimed and defended over these years—was just a measure of contingency and not an article of faith in basic education.

All this is stated not merely to rake up the dead, fruitless past but to emphasize the truth that no clear, practicable and effective policy on basic education has ever been formulated at the national level during the past so many years. It is undoubtedly true that individual institutions in different states have worked out basic education in their own distinctive ways and tried to give it a shape and direction

1. Ministry of Education, Government of India, *Orienting Primary Schools Towards the Basic Pattern*. Delhi, 1957. P. 3.

2. NCERT. *op., cit.* P. 71.

in the light of modern child education and all that it stands for. But so far as the overall national picture is concerned, there is no denying the fact that basic education has been roaming like a wandering nobody in the no-man's land between 'creativity' and 'productivity' and between 'learning by doing' and 'learning by earning'. Yet it is known that if teacher education is a complex job with wide ramifications in various basic disciplines, its implications are far more challenging in regard to basic education that for the first time aims at a radical reformation of our old elementary education through the introduction of new curricula and teaching methods. Therefore what we need today is a bold policy enunciation on basic education in order that every basic worker from the office to the school could know where he stood, what exactly are the objectives and how he should achieve them. Agreement over some 'common minimum essentials' should not be misinterpreted as regimentation.

BASIC EDUCATION—A FEW BROAD STATEMENTS

In the light of our discussion in the foregoing paragraphs, a few broad principles of basic education may be summed up :

1. Basic education is an improved type of child education. Basic education may be interpreted as a platform to organise scientific and modern ideas on child education 'for making all our primary schools better schools'.¹
2. Basic education is to strive to create for the child opportunities and organisations in which he will be able to receive training and continue practice in the fundamental skills, attitudes and knowledge necessary for personal fulfilment on the one hand and maintenance and promotion of cherished social values on the other.
3. A child is essentially an active human being always interested in handling things, manipulating tools and doing something. Because of this innate creative urge in the child, basic education provides diverse creative activities in child education. Crafts having educational and social utility constitute just a part—and an important part at that—of these activities. A craft is a practical subject in the curriculum and not the vehicle of education.
4. Craftwork presents numerous problems to the learner, and while grappling with them he gains experiences of varied nature and these experiences constitute important stepping stones to his knowledge. Knowledge is thus concretised

1. K. G. Saiyidain. *Address to the National Seminar on Orienting Elementary Schools Towards the Basic Pattern*. Allahabad, May 3, 1959.

through a process of action and comprehension leading thereby to what may be called 'literacy of the whole person'.

5. Craftwork must be done in a well-planned, thorough and systematic way. No work is to be done in a slovenly way. No toying with craft is to be tolerated. When done seriously and methodically, craftwork is bound to lead to some production. It will be the inevitable outcome, however modest, of a practical job done in the way it should be done.
6. Education and activities are to be planned with an eye to the age, ability and aptitude of the child. There must be sufficient emphasis upon individualised instruction. Only that much of craft technique is to be employed which may be mastered by the child with ease and discernment.
7. If instead of crafts a school chooses for organisational reasons only diversified activities and yet succeeds in creating healthy learning situations through improved techniques of classroom teaching, it will be as good a basic school as any with crafts. Activities are to be planned and pursued in such a way that the opportunity to tackle problems at the formative stage of life develops in the child a kind of confident personality and sharpens his manipulative and inventive power—qualities vitally necessary for our entry in the machine age.
8. The purpose behind the introduction of crafts is not merely to import activity and enliven child education but to enrich it with a deeper social meaning. Basic crafts like kitchen-gardening, weaving, woodwork etc., not only help a child to exert his limbs, handle tools and produce something socially useful but also give him an insight into the functioning of some indispensable productive processes by which the entire fabric of society is sustained. By participating directly in productive craftwork he is likely to look from a new angle of vision at the men and women who actually produce from behind the gaze of public attention and by their toil keep society moving. This is expected to develop in him an enriched personality, love for the people, appreciation of manual labour and a feeling of social cohesion. With this experience he may thus grow into a concerned citizen and not remain a mere academic recluse.
9. The exploration of the physical and social environment is to be directed to the study of the soil, population, climate, vegetation and animal life, local production, trade and commerce, means of communication, education, health and sanitation, seasonal festivals, cultural pattern etc.,—all of which have direct bearing upon the collective life of the

society. The basic school has always to remember that education does not mean mere classroom instruction but suggests that an individual becomes a citizen only through interaction with his environment.

10. It is not necessary to prescribe any hard and fast rules about the correlated method of teaching. The teacher will follow his own method in relation to the topic under discussion. Correlated teaching may be done when there is scope for easy and natural correlation. When no such scope is present, lessons may be done through improved formal teaching due regard being paid to such factors as motivation, art of questioning, use of teaching aids and child's participation in the learning process. If craft becomes a subject in the syllabus and ceases to be the vehicle of education, the preponderance of correlated teaching remains no more.

A basic school based on these principles can successfully help a child become a useful citizen. This rationale for basic education will help us examine the functioning of a training college in the right perspective.

POST-GRADUATE BASIC DIPLOMA—THE DETAILED PROGRAMME

Institutions

The post-graduate diploma in basic education is now offered to teachers, inspectors and teacher-educators almost in all the states in the country with minor variations in emphasis on the details of the programme. There is no post-graduate basic training college either in Andhra Pradesh or in Assam. Up to 1964 there were nine graduates' training colleges in Andhra Pradesh but they were all affiliated to the universities at Waltair, Tirupati and Hyderabad and they offered B.Ed. courses. In Assam there was one basic training college for graduates but this had been abolished in 1965. Today there are only 'Specialisation Courses in Basic Education' offered in the conventional training colleges under the universities. While in most of the states the number of post-graduate basic training colleges is on an average one or two, in Rajasthan there are five B.Ed. colleges which offer courses in basic education under the control of university authority.

The nomenclature of the training course differs in different states. In Madhya Pradesh it is known as B.Ed. (Basic) and in Uttar Pradesh as L. T. (Basic). In Madras, Maharashtra and West Bengal the course is known as B.T. (Basic) while in Bihar, Gujarat, Kerala and Mysore it is known as Post-graduate Diploma in Basic Education. In most states in the country there now exists parity between the Post-graduate Basic Diploma and the B.T./B.Ed./L.T. or equivalent course offered by the universities.

Aims and Objectives

The aims and objectives of a post-graduate basic training college are :

1. To offer a course of education and specialised training for graduate teachers of senior basic, junior high and in rare cases of primary schools. In many of the states, for instance, Madras, Mysore, Orissa, Tripura, Uttar Pradesh and West Bengal, graduates passing out of the basic training colleges are appointed as teachers in high and higher secondary schools also.
2. To offer a course of education to teacher-educators of basic training institutions where primary and basic teachers receive training.
3. To prepare educational administrators and inspectors for basic education. Educational inspectors are usually sent to the post-graduate basic training college for attending short orientation courses in basic education. In West Bengal, this course is of six months' duration. This course was discontinued in 1959 for administrative reasons. There is hope it will be revived soon.
4. To provide opportunities for democratic community living and to develop in the student-teacher keen social consciousness in order that he can bring the school and community closer for mutually beneficial results.
5. To organise extension services and in-service guidance programme for elementary teachers where such centres have been set up.

The thin line dividing basic and non-basic graduates' training colleges is gradually disappearing because of the fact that in many of the states basic trained graduates are appointed in increasing numbers in high and higher secondary schools and because there is parity between the basic diploma and equivalent university courses.

Selection of Trainees

The procedure of selecting trainees too differs in different states. In *Madras* applications are invited for both basic and non-basic government training colleges and a preliminary screening is made at a joint meeting of the principals of the training colleges convened by the principal of Madras premier teachers' college at Saidapet. The selection is made at an interview by the principal of the concerned college assisted by its staff members. In *Mysore* trained graduate teachers with sufficient service to their credit are deputed

by Government or private bodies'. It is significant that in Mysore only trained graduates are eligible for admission in the post-graduate basic training college. The deputed student-teacher gets an allowance of Rs. 30.00 per month in addition to pay. In *Orissa* the teachers apply through their employers to the principals of the training colleges and if 'their applications are forwarded' and they 'stand the test' successfully, they are admitted. Each trainee is given Rs. 45.00 per month as financial assistance. In *Rajasthan* government employees sent for training under deputation are selected on the basis of seniority. The teachers of government schools get their pay and stipend. Private institutions also send their teachers for training. It may be with pay or without pay. In *Tripura* hundred per cent of the trainees are sent on deputation by the government. The selection is made by the education directorate on the basis of office records. No interview is held for the purpose. In *Uttar Pradesh* the preliminary selection is made at the district level and a list of names is recommended to the principal, Government Basic Training College at Varanasi and the final selection is made by a 'Committee constituted by the Government'. In *West Bengal* freshers are selected on the basis of their academic record and performance in the interview before a board comprised of staff members of the training college. Secondary teachers already in service have a marked preference for the B.T. course and so admission in the basic training college is sought mainly by the freshers.

A review of the selection procedures will show that great variations do exist in the states. The only procedure followed in majority of the states is a scrutiny of the academic records followed by personal interview. As a result of this method teachers of indifferent academic and social quality can also enter the training colleges and pass out as qualified teachers. In view of the rising public concern expressed over what is believed to be falling standards in school instruction, the need to set uniform and minimum standards for selection of teachers cannot be overemphasized. The recommendations made in this respect by the Study Team of the Committee on Plan Projects, Government of India, merit consideration. The Study Team advocated a combination of three methods: (a) examination of academic records and past achievements, (b) performance of the candidates in aptitude tests designed for this purpose, and (c) interview by a Selection Committee.

Curricular Pattern

The curriculum in a training college is divided into two parts—theoretical and practical. The theoretical part usually consists of the following subjects:¹

1. *Educational Foundations*. In this paper are generally combined all such subjects as principles of education, educa-

1. Committee on Plan Projects, Government of India, *Report on Teacher Training*. New Delhi, 1964. P. 57.

tional sociology, rudiments of history of education, great educators and in some cases also problems of current interest. The details may vary from state to state.

2. *Educational Psychology and Child Development.* This paper is almost similar to what is done in the B.Ed. course. In the basic syllabus the emphasis on activity education is more prominent.
3. *General Methods of Teaching.* This paper includes general maxims of teaching, media of teaching, lesson plan and lesson notes, use of teaching aids, group teaching, techniques of correlation, gifted and backward children, etc. The resemblance between this paper and what is done in the B.Ed. class is striking.
4. *School Organisation and Supervision.* This subject is also common with what is done in the B.Ed. class with this much of difference that in the basic syllabus greater attention is given to such topics as organisation of craft teaching, craft sheds, maintenance of records, time table in a basic school, school and community relations, etc.
5. *Special Methods.*—This paper deals with special methods of teaching school subjects such as Mother Tongue, Mathematics, Science, History, Geography, English, etc. A student teacher is usually required to take two subjects.
6. *Special Paper.* In some states there is also a special paper to be taken from the following group : (a) History of Education, (b) Educational Administration and Supervision, (c) Guidance and Counselling, (d) Evaluation and Measurement in Education, (e) Comparative Education, (f) Teacher Education, (g) Social Education, (h) Scholastic Backwardness and Remedial Teaching.

In the practical part are to be found crafts, teaching practice, physical education, music, art and handwork, community work, etc. Needless to add that teaching practice and craftwork constitute the pivot of practical activities.

There are two categories of post-graduate basic training colleges in the country. In some states, for instance, Madras, Orissa, Punjab, Rajasthan—the colleges are affiliated to the universities. In others, for instance, Kerala, Mysore, Uttar Pradesh, West Bengal—the colleges are governed by the State Education Departments. The syllabus followed in the first category of colleges has to be approved by the appropriate university authorities (Board of Studies). The university again is the examining body of such colleges. Regarding the second category, the State Departments of Education wield abso-

lute authority. Usually the syllabus is designed not by the training college staff who do the job and are supposed to know the details better but it is framed in accordance with the wishes of the departmental authorities. Their say is again final in respect of staffing pattern and examination.

The complaint is almost universal in non-affiliated training colleges that basic training is a bone-breaking job which commences with the rising bell at 4-30 A.M. and continues up to night. The curricular load is heavy and varied. The trainees hardly find any time for consolidatory study. In Madras, for instance, the basic training college is affiliated to the university and the total number of marks in the final examination is 900, whereas in the neighbouring state of Mysore where the college is not affiliated, the examination consists of 1,200 marks. In West Bengal also (colleges not affiliated) the total number of marks is 1,175. Ten years back it was 1,500. Sheer limitation of space prevents the writer from going into the details of further comparative study. It is to be thought over how far it is possible to do justice to a course of studies which consists of a none-too-modest pedagogic section, teaching practice, one basic craft, two or more subsidiary crafts, physical education, responsibilities of community living, etc., and which carries a total of about 1,200 examination marks. Yet the effective working period in a year hardly totals up to 200 days. Panjab is an exception where some of the colleges are already working up to 237 days and still trying to extend the period. A close review of the syllabuses will reveal what a big gap remains between what is demanded of a trainee and what is humanly possible for him to achieve in course of nine months. It may be suggested, however, that where basic training colleges are not affiliated to any university, a suitable machinery consisting of official and non-official educators be devised to rationalise the syllabus and bring it within the level of aspiration of the average graduate teacher.

It is to be noted that in very few syllabuses can one see a clear delineation of the aims and objectives of the training programme. What a student-teacher is likely to do on completion of training is a vital question having decisive bearing upon the entire training programme. But such goals are not clearly formulated and so after attending the same course an individual becomes an assistant teacher, the second an inspector and the third a teacher educator. That the matter has not been properly taken care of will be evident from the fact that many of the syllabuses are not printed, while some of the cyclostyled copies are hardly legible.

Another point to be noted is that no mention is made in the syllabus about the methods of teaching to be followed. It goes without saying that "if the lecture method becomes the only method, it defeats the purpose of education and makes examination and passive acceptance of information the end of all classroom endeavour."¹ The syllabus

1. Department of Teacher Education. *Elementary Teacher Education*. Delhi, NCERT. 1965. P. 163.

bus may, therefore, give some broad suggestions about the teaching methods such as, assignment, group discussion, tutorials, organised school visits, etc.

Practice Teaching

Practice teaching in a post-graduate basic training college raises an important question. A basic trained graduate may work in a senior basic school. He may also work in a high school. He may be appointed as an inspector of primary schools or he may work also in a teacher training institution. When so many avenues are open before the student-teacher, it is hard for the training college to locate him in the right place and plan for his teaching practice. Under the circumstances, it has no alternative but to respect the choice of the individual student-teacher and help him accordingly.

The organisation of teaching practice differs in different areas. In some places, it is organised over a long period of time and the teachers impart lessons only in one or two subjects almost throughout the year. There is also the system of intensive and continuous teaching practice for a fixed period of time, say, three or four weeks at a stretch—as in West Bengal. There is also the fixed quota system of lessons, say, sixty lessons in all—out of which some must be correlated lessons. Whatever may be the system, the fact remains that practice teaching leaves much to be desired. The common refrain of criticism may be summed up as follows :

1. The period of time allotted for teaching practice is too short to give the trainees any real insight into how a school instructional programme can be drawn in a purposeful, adequate and effective manner.
2. Demonstration lessons given before teaching practice are scrappy. A student-teacher does not get adequate opportunity to observe class teaching in the school setting, and thus cannot establish a rapport with the children prior to taking the class all by himself.
3. Practice teaching is done in an atmosphere of artificiality. The normal working conditions in the school are considerably shaken up owing to unrealistic introduction of craft-activity programme which has nothing in common with the school realities or with the situations in which the student-teacher will be required to work on completion of training. Sometimes the training college insists on lesson plans, lesson notes, correlated teaching, improvisation of teaching aids etc., in an exacting fashion. The student-teacher has often to burn a lot of mid-night oil to complete the ritual, and when teaching practice is over, instead of congratulating himself on a job well done, he breathes a sigh of relief that he has survived the ordeal.

4. The preparation of lesson notes is stereotyped with mechanical emphasis upon the 'steps' and insistence upon a fixed number of correlated lessons. This interferes with the normal academic progress in the school and little tangible progress is made in classwork in the name of craft, activity, project, and correlated teaching.
5. The relation between the training college and practising school is not based on working partnership and on an understanding that each should take to the job in a spirit of investigation. Consequently the practising teacher is often tolerated as an unwelcome guest. The situation sometimes deteriorates because the training college has no administrative control over the practising schools.
6. The number of supervised lessons is small. The staff members of the college, their strength being what it is under normal circumstances, can hardly improve the situation in view of the time-consuming nature of the job and the question of physical movement involved in the matter, more so when the schools are scattered in far-flung areas.
7. Very few training colleges have their own practising schools. Even if they have, this only school is hopelessly inadequate for engaging all the teacher-pupils at one time.

Although practice teaching is the most important aspect of the training course from the functional standpoint, it is at present one of the weakest spots—whether in basic training colleges or elsewhere. The problem is a big one and a fit subject of independent study obviously beyond the scope of the present article. Basically, the problem seems to be related to time. By providing opportunities for observation of and participation in teaching, by giving demonstration lessons and offering better guidance and supervision, we may somewhat remove the present shortcomings, but practice teaching can hardly be successful unless the student-teachers feel that they are as much a part of the school as the other inmates are. This complete identification may be possible, if (a) the student-teachers are made to work in the school not as temporary immigrants but as regular members of the school staff, and (b) they stay long enough in the school to have a feel of the total learning situation around them. While the internship system may be workable under favourable circumstances, it is difficult to work out the second proposition unless the training period is extended to two years.

Teaching of Crafts

Before asking the graduates to undertake craftwork, an explanation becomes imperative as to why they should do crafts at all. When placed as teachers in senior basic/high/higher secondary schools, they

will obviously teach the content subjects taken as method papers during training. They will never teach crafts or, to be more accurate, they will never be allowed to do so because of their questionable proficiency acquired in nine months. Secondly, as beginning inspectors of junior basic schools, their craft training may be utilised in supervising craft-teaching in the schools. But a question to be answered in this connexion is whether full-fledged craftwork has at all been introduced in our junior basic schools. It is perhaps true to say that in few junior basic schools is craftwork being done in a thorough, systematic and serious manner. Regarding senior basic schools, the question of supervision does not arise, because senior basic schools are usually outside the jurisdiction of beginning inspectors. Thus whatever the inspector does, his craft skill stands the least chance of being applied in day-to-day work. Thirdly, as lecturer in a teacher training institution too, there will be no scope before the teacher-educator to put his craft skill to any use. In a training institution craft instructors are professionally trained people who know their trade much better than the so-called teacher-cum-craftsmen made in the basic training colleges. So in neither of the areas where a graduate with basic training may work, will he need crafts to do justice to his calling. The *modus operandi* behind craft-teaching on grounds of correlated teaching becomes obscure when one considers that the theory of education through the medium of crafts has not been accepted in the academic circles of the country. Professional opinion is now unanimous that the scope of correlated teaching at the secondary stage is insignificant, because the topics in the syllabus are arranged in a graded logical sequence from the simple to complex, while correlated teaching deals with the syllabus in a loose, arbitrary and incidental fashion leaving thereby wide gaps between the topics. Besides, we have yet to train that type of teacher-artisan who will be a master of both crafts and knowledge contents to correlate the subjects at the secondary stage. Moreover, the idea of correlated teaching becomes totally unworkable at the middle/secondary stage for another reason. If we allow choice of crafts in a given class in terms of individual interest, we will never find a class that will opt for only one craft. Thus some students may choose woodwork, others may take weaving, girls may prefer tailoring and needlework and still others may choose mechanical workshop jobs. When a single class is divided into four separate craft classes, how can correlated teaching be done when the different groups reassemble again in the common period on, say, mathematics or social studies? The points of correlated teaching from separate crafts under separate instructors must be different. If the subjects also are done by the craft instructors, progress on a subject in the same class will be different under different instructors, and eventually it may be necessary to banish the present class system and reorganise the school on the basis of crafts. This is simply unworkable from practical considerations. So lessons may be correlated only when all boys and girls do the same craft and under the same instructor. But educationally, this is an unsound position. Lastly, it is to be remembered that a student from the senior basic school has to seek admission in a

conventional higher secondary school and compete with students whose instructional programme has been different. Therefore it may be unrealistic to take undue liberties with the academic endeavour of the pupil and emphasize on correlated teaching for vague and unpredictable results.

So the basic question remains—what does craft-teaching stand for in a basic training college for graduates? The goal is disciplinary, educative and enriching of personality. There should not be two opinions about the fact that handicrafts must have a place in the school curriculum. Once activity methods were adopted for child education, handicrafts took little time to conquer the primary schools. Even at the secondary stage, *thirty-eight nations of the world do have crafts today in their school programmes*.¹ The handicraft enquiry published by the UNESCO and International Bureau of Education, Geneva, in 1950 states that most nations of the world prescribe crafts because of their 'educational value'. The subject is accorded an essential part in the forming of character and the education of the will. It demands attention, concentration, perseverance, accuracy and method, and creates habits of orderliness, neatness, precision and foresight. It is, in a word, a very thorough discipline of work. The opinion from Czechoslovakia states: 'Through handicrafts children should gain power . . . to work conscientiously and be ready to assume responsibility'. The French opinion is that 'the aim is not merely to develop manual skill. They must also foster a child's power of imagination, observation and initiative, and develop his liking for work well done. . . They must, in short, play an important part in his intellectual and moral upbringing'.²

Craftwork then is to be done for disciplinary values which enrich the human personality. It will be more profitable therefore to ask the trainees to concentrate on one important craft instead of diffusing their energies on one basic craft and two or more subsidiary crafts, when the time at their disposal is only nine months. Another point to be remembered in this connexion is that when handicrafts are introduced universally in all our secondary schools, craftwork may cease to be a major practical subject in teacher education programme and remain an optional refresher course for the reason that all future teachers, unlike their present counterparts, will have received training in crafts during their school-stage education.

Community Living

The collective living within the same campus by staff members and student-teachers is undoubtedly a strong point in basic training which :

1. gives the student-teachers experience in democratic community living and fosters in them close interpersonal relations,

1. Unesco-International Bureau of Education. *The Teaching of Handicrafts in Secondary Schools*. Geneva, 1950. P. 7.

2. *Ibid.* P. 12.

2. provides opportunities for development of community consciousness and integrated personality through continuous social interaction,
3. through powerful personal impressions orients the student-teachers to a new belief and awareness in service and progress,
4. develops in the student-teachers self-reliance, initiative and stamina in the face of difficulties, sense of responsibility and qualities of leadership,
5. enables them to understand the importance of physical and mental health and develops attitude and habits necessary for a clean and healthy life,
6. gives them practical training in the matter of how the school and community be drawn closer together through gainful activities,
7. makes them familiar with the background of constructive work in our communities and through suitable action programmes makes them alive to the community problems and the ways of attacking them,
8. develops in them such attitudes and skills as will make them confident to take initiative in introducing suitable programmes, however modest and unsophisticated, for the betterment of social conditions, and
9. strives to achieve a high state of efficiency and discipline in collective life and symbolise a new value system based on spirit of service and dedication.

The items in which the student-teachers directly participate are hostel life, kitchen and food management, cleanliness programme, health and sanitation, games and sports, cultural functions and community service programmes.

Evaluation

In states where the training college is affiliated to the university, the holding of examination poses no problem to the college, for the authority of the university is supreme in the matter. In regard to the non-affiliated colleges, the examination is conducted by the State Education Department. The existing practices present a combination of both internal and external assessment in theory and practical parts. In regard to the theory papers, external examination is the accepted pattern everywhere. The answer scripts are examined both externally and internally, while for some practical activities there is no external examination at all. In Tripura, for instance, all the theoretical papers are assessed entirely by external examiners, the college having nothing to do in the matter. But in agriculture and kitchen-gardening the assessment is made entirely by the college staff.

The issues which are of interest in this respect are about (a) the relative weightage to be given to external and internal examination, (b) methods of evaluating practice teaching, (c) methods of evaluating craftwork, (d) objective assessment of community activities, and (e) assessment of personality traits. The Committee to evolve Model Syllabi for Elementary Teacher Education have made some useful suggestions in this matter which hold good both for undergraduate and post-graduate training colleges.¹

The general consensus of opinion is that in regard to the *theory papers* provision for external examination should be to the extent of 75 per cent and 25 per cent of the marks should be awarded by the college on tutorials and assignment work. *Teaching practice* should be evaluated internally by the college supervisors in consultation with cooperating teachers, if and when their help is sought from the practising schools. They are the best persons to assess the teaching skill of a teacher as he develops lessons from day to day. The 5-minute hurried peep into the class by the external examiner (in many cases, shorter)* is a thoroughly unreliable instrument of assessment which convinces none—neither the college nor the supervisor and least of all, the practising teacher who has to put in some hard labour for the purpose. However, for the sake of public confidence and maintenance of standards there may be a Board of Coordinators at the Education Department who will assess the final lessons in cooperation with the training college staff. *Assessment of craftwork* should necessarily be entirely internal. In keeping with the very nature of craftwork an instructor has to keep continuous records of the trainees' performance—attitude, planning, speed and efficiency, neatness, finishing, care of the tools etc., and these factors may well form the bases of assessment. *Community Activities* also should be assessed internally, as is the present practice everywhere. The items generally recommended for assessment of community activities are : 'cooperation among colleagues, removing the feelings of . . . untouchability, observation of daily routine, attitude towards village life, neat and clean surroundings, adjustment and behaviour in the dining hall, . . . respect for other religions, social service activities . . . solving school problems, etc.'²

The Impact of the Programme on School

It is somewhat complicated to pronounce verdict on the impact or otherwise made by the basic training college on the tone of our schools. It is to be remembered first that just as there always remains difference between a good school and a bad school of the same system, in the same way there must be some difference between a

1. *Mukerji Committee Report*. Pp. 135-138.

2. *Ibid.* P. 137.

* The writer has been an external examiner assessing 32 lessons in 65 minutes during the final examination.

good training college and a bad one and between what they turn out respectively. A training college has hardly any independent existence of its own. It lives through the teachers who pass under its portals, and thus its contribution to the betterment of schools is indirect in the sense that its ideals, values and techniques are transmitted through the intermediary of the teacher. Moreover, a good training college and its good output cannot make much headway, unless the administrators share the same faith and zeal and come to the assistance of the field-workers, as is their paramount duty. So the training college cannot be assessed in isolation from other related factors. Thirdly, no reliable research project on national scale has yet been designed to make any comparative study of achievements or interests and aptitudes or personality development of pupils reading in basic and non-basic schools. So comments about a basic school both in favour or against may be fallacious for want of valid data. Therefore while discussing the impact of the basic training college upon the school, one can speak only in general terms.

1. It is generally believed that the overall atmosphere in a basic school is homely and informal and conducive to the growth of happy interpersonal relations between the teachers and students. The key to this homely atmosphere lies in carry-over of satisfying experiences of community living from the training college itself.
2. Since in a basic school the child is allowed a good measure of freedom and given opportunities to participate in the collective life of the school—school parliament, literary activities, sports and games, important cultural functions etc.—he gets first hand experience in group deliberations, planning, execution and also in facing criticism, all of which combine to make the child disciplined, confident, alert and willing to face responsibilities. It is also said that children from basic schools are hardy, diligent and capable of putting shoulders to the wheel, if need be.
3. When thoroughly done, craftwork makes a powerful impact upon the child, his development of social consciousness and unfoldment of personality. Through personal involvement in craftwork he virtually rediscovers our farmers, weavers, carpenters and other social groups who for generations have been silently toiling to sustain the society and yet whose own lives are steeped in utter destitution. At a time when the age is impressionable and the mind receptive, experiences of craftwork along with safai and community service programme leave a profound influence upon the growing child. This is perhaps the most significant impact that is made by a basic school upon the society. And this new outlook and thinking is given by the basic teacher.

4. No special distinction can perhaps be claimed by basic education in the field of teaching methods. The activity method as it is practised today is an importation from the West. The correlation method, claimed to be typically basic, has, instead of clearing confusion, made it worse confounded—thanks to its over-zealous exponents. Besides, those who are familiar with the theories of Ziller, Herbart, Dewey and the Complex Method of the Soviet Union, will not find anything new in the correlation method. Generally speaking, no attempt is made today to apply correlated method at the secondary stage. It may be followed only in the lowest grades of the primary stage. The contribution of the training college towards the improvement of class teaching perhaps lies in the direction of better lesson plans, teacher's own preparation, use of teaching aids, home work and examination.
5. The system of examination in a basic school has somewhat departed from the stereotyped essay-type tests. Examinations on Social Studies, Natural Science, Hygiene, etc., are given through objective questions. Even in language papers the technique of setting question papers has changed. Emphasis is also laid upon the maintenance of personal records of the students.
6. The observance of important national days and organisation of seasonal functions is an important feature of basic schools which again is an inheritance from the training college.
7. A good basic school seeks to identify itself with pressing community needs and from time to time undertakes suitable programme of work, may be simple and modest, to meet these needs in joint endeavour with the community. As a result of this the students become more conscious about the community and grow as better social workers.

SOME PROBLEMS AND DIFFICULTIES

There are quite a few special problems before a post-graduate basic training college which need attention and early solution.

Clearing Confusion

The *raison d'être* of basic education should be explained in the most clear and unequivocal terms and its objectives, organisation and methods formulated at the highest national level. The student-teacher simply moves in the air when he finds that the scheme of education that has brought him to the training college is interpreted differently by different people—differently by two colleges in the same state, nay, even by two lecturers in the same college. It is common knowledge that many of Gandhiji's philosophical and socio-economic beliefs had been silently set aside by his political followers even during his

lifetime. What is the harm if some rethinking is made on basic education and the scheme is rationalised in the light of the last twenty years' experience? Basic education that is believed to be 'as being at its dead end'¹ can come back to life if a practicable programme of action is drawn under the authority of top national experts so that this potentially sound system of child education no longer remains a go-as-you-like affair. Goals should be determined and every basic worker must know what he is about.

Morale of the Teachers

For a number of reasons the morale of the teachers at present is rather at a low ebb. The community is not appreciative of basic education—his sphere of work. The parents are suspicious and look down upon basic education as of low caste designed to hookwink the masses with the chaff of education and not its grain. His area of work is also limited, for normally he is expected to work only up to the elementary stage. The scope of going in for higher professional education is restricted before him, for in many states the post-graduate basic training college is not affiliated to any university and some universities do not recognise the post-graduate diploma in basic education despite its inherent curricular strength. And regarding his pay and status, no comment is necessary. Besides, as education expands more and more to reach the doors of every home, basic schools are being set up in areas where no amenities exist—not even a shelter for the teacher. To work in such areas for an indefinite period of the time requires a high state of personal mobilisation. But mobilisation implies cooperative action in all spheres—from top to bottom, from office to classroom. Moreover, since elementary schools in the country are, by and large, treated in the most elementary way, his school hardly receives the attention it deserves from the higher authorities. Problems pile up in regard to school house, staff, craft teaching, discipline etc., and ere long his enthusiasm dies out and what remains of basic education in the school is an imposing signboard. Education which means a war against catastrophe can hardly be won by an army of dispirited teachers. Mere 'tricks of the trade' doled out by the training college cannot hold the fort. This sagging morale of the teachers cannot but affect the functioning of the training college too.

Dual System of Education

The position is aggravated by what may be called the existing dual system in our education—basic and non-basic. It is said that basic education is the national pattern of education for the elementary stage (Classes I—VIII). Yet in few states does one find an integrated syllabus for all schools up to the elementary stage. There are senior basic schools with eight classes and side by side with them one can see conventional Middle English/Junior High Schools running the same

1. Prem Nath. *Failure of a Great Experiment in Education*. 'The Education Quarterly, Ministry of Education, New Delhi, December, 1964. P. 197.

classes. On the one hand there are Classes VI, VII and VIII in a senior basic school, while on the other the same classes are incorporated in an ordinary high school following a different syllabus. Since a pupil has eventually to join a conventional secondary school to sit for the school final examination, he tries to leave the basic school just after the fifth grade and join the secondary school right from the sixth grade so that he may not miss the bus later on. The result is that Classes VI, VII and VIII of a senior basic school are badly affected. The question asked by the teachers is that if basic education is the accepted pattern, why are the first three classes (VI, VII and VIII) of a secondary school run differently? Secondly, the meaning behind running two types of training courses at the graduate level (Basic Diploma and B.Ed.) is not also clear to the teachers. As stated earlier, basic trained and B.Ed. people are frequently interchanging positions in the school. This duplication confuses the basic teachers and creates problems for a basic training college. The training programmes at the B.Ed. and Basic levels are now almost similar and some of the healthy features of basic training have been introduced in the B.Ed. syllabus too. It is, therefore, to be thought over if there is any need of this duplication of training facilities at the graduate level. It may be necessary to streamline training programmes on the basis of different stages of education—nursery, elementary and secondary—but not on basic and non-basic lines. It is also necessary for each state to prescribe a uniform integrated syllabus for all schools upto the elementary stage. This has been done in Bihar and this creates an effective bridge between elementary and secondary education.

Slow Progress of Basic Education

Not much notice is taken of the fact that despite all lip-service and fanfare, the progress of basic education has been much slower than that of traditional education. The following figures will explain :

TABLE 20*
PROGRESS OF BASIC EDUCATION SINCE, 1950-51—1965-66

	1950-51	1955-56	1960-61	1965-66
1. Percentage of Junior Basic Schools to the total number of primary (including junior basic) schools	15.9	15.4 —(0.5).	29.2 +(13.8)	36.9 +(7.7)
2. Percentage of Senior Basic Schools to the total number of middle (including senior basic) schools	2.9	22.3 +(19.4)	30.2 +(7.9)	28.9 —(1.3)
3. Percentage of children in elementary schools to the total number of children in the age-group 6-14	32.0	40.0 +(8.0)	48.3 +(8.3)	60.0 +(11.7)
4. Percentage of children in basic schools to the total number of children in the age-group 6-14	4.1	6.9 +(2.8)	11.3 +(4.4)	Not known

*National Council of Educational Research and Training. *The Indian Year Book of Education*. New Delhi, 1964. P. 308.

It is seen that the rate of increase of both junior basic and senior basic schools is falling down in proportion to that of primary and elementary schools. Enrolment figures at the senior basic stage too are decreasing in proportion to that at the elementary stage. This slow growth of basic education interferes with one aspect of the training programme—namely, teaching practice. Owing to a smaller number of senior basic schools, a student-teacher has necessarily to practise teaching in a non-basic school where more often than not he is received as an unwelcome guest. This creates a serious psychological handicap for the trainee and poses problems for the training college.

Link with the University

In the states where the post-graduate basic training college is not affiliated to any university and consequently its diploma is not recognised, the student-teacher faces a dead end to his quest for further professional studies and naturally seeks to join the B.Ed. course instead of basic training. Some universities do of course recognise the basic diploma awarded by the state department of education, for instance, the Universities of Baroda and Gorakhpur, but this question of equivalence has not been decided as yet either by the Central Advisory Board of Education or the Inter-university Board. Yet basic trained people are being absorbed in all types of jobs—in schools, in training colleges and in administration.

The Assessment Committee took note of the position and suggested that 'Central and State Governments . . . must take up the matter with the Universities . . . particularly in regard to the establishment and recognition of Post-Graduate Basic Teachers' Training College'.¹ Post-graduate basic training colleges should as a rule be affiliated to the universities. The practice of having a few institutions a close preserves of the departmental authorities should be done away with. It is true that one of the reasons why basic education is still considered somewhat outlandish in academic circles is its lack of effective contact with the universities. At a time when the post-graduate basic diploma is considered on par with B.Ed./B.T. degrees and when the question of affiliation has already been settled in some of the states, the continued exercise of control over the basic training colleges by departmental authorities is not compatible either with the requirements of professional standards or the principles of educational administration. It is true that mere affiliation to the university will not be the panacea for all evils afflicting basic education, things may worsen instead of improving. But the academic tradition in the country being what it is, it is practical to organise all types of post-graduate teacher education under university control. Duplication of training facilities under dual administration for the same category of teachers is anything but a sign of strength.

1. Ministry of Education Government of India. *Report of the Assessment Committee on Basic Education*, op. cit. Delhi, 1957. P. 65.

Administration

The Assessment Committee said : 'We have already stated, and we repeat it now—we had the distressing experience of seeing Basic education being slowed down, misdirected and retarded, due entirely to . . . the wrong administrative set-up.'¹ Without analysing how administration has failed basic education at every crucial step from opening of schools to inspection, our observations may be limited to a few points pertaining to the training college. In a basic training college there may be found educators who did not undergo any basic training at all but received their professional training elsewhere. These people enjoy fun at the cost of basic education, cut jokes about safai under the shade of trees, mock at craftwork and community living and undermine the morale of the student-teachers. As regards recruitment of personnel for basic schools, it is seen that recruitment is made often with an eye to solving the problem of the 'educated unemployed'. No teachers' diploma can build up a system of education unless the teaching personnel whose job it is to activate it have the minimum personal qualities, a sense of duty and an awareness about our social needs. The problem is further aggravated because of the lack of prestige that basic education suffers from. The short period of training also complicates problems. Through community living and personal impressions the training college may try to recondition a teacher to the useful side of life, but before this could be done, the time to leave the college comes. Besides, much of the work done by the training college is neutralised because of lack of liaison between the training college and inspectors. Our inspectors have little time for supervision and guidance work, as was revealed by the Bombay Study.² So after passing out of the college, a trained teacher becomes as good or as bad as an untrained teacher.

The Assessment Committee's remarks about the administrators might have been harsh in the general sense. But these will appear to be mild when one recalls that there are administrators who inaugurate opening of basic schools, sing its glory in public and then in private declare : 'Basic education is a good form of education for the children of others'. No wonder Dr. Zakir Hussain remarked : ' . . . basic education would not develop in an atmosphere of insincerity and dishonesty. It would be more honest to scrap the system rather than try to sabotage it'.³

Research

Although the record of research work in basic education is insignificant, the training college can hardly do anything substantial in the

1. Ministry of Education. Report of the Assessment Committee on Basic Education, *op. cit.* Delhi, 1951.

2. NCERT : *op. cit.* Pp. 364-73.

3. S. N. Mukerji. *Education In India—Today and Tomorrow*, Fifth Edition, Baroda, Acharya Book Depot, 1964. P. 57.

matter in view of the meagre resources at its disposal—limitations of time, finance, personnel and administrative authority. The training college can possibly play a role in this sphere, however modest and unsophisticated, provided necessary opportunities were created for this purpose by a coordinated effort of the universities and state departments of education.

CONCLUSION

Basic education has been interpreted as an improved type of elementary education. And elementary education in the country stands today at the threshold of history. Great is the challenge, therefore, before an institution that is responsible for the education and training of elementary teachers. A post-graduate basic training college can meet this challenge effectively if it remembers that basic education is neither a sermon nor a formula but just an instrument of education for the advancement of our society and that this scheme can be implemented provided the impediments in its way are removed by the coordinated efforts of the administration, university and the community.

12 THE FOUR-YEAR DEGREE COURSE IN EDUCATION

A. C. Deve Gowda

INTRODUCTION

There were in India in 1965-66, 275 institutions training graduate teachers for secondary schools. They were of various types, e.g., Departments of Education of Universities, Colleges of Education or Teachers' Colleges and Teacher Training Departments of Arts and Science Colleges. They were managed by State Governments or universities or autonomous bodies set up by government or private organisations and almost all of them were affiliated to universities. All of them except five offer a one-year course in Education to those who have already taken a Bachelor's Degree from a University. Those that offer longer courses are the following; (1) College of Education, Kurukshetra, Punjab; (2) Regional College of Education, Ajmer, Rajasthan; (3) Regional College of Education, Bhubaneswar, Orissa; (4) Regional College of Education, Mysore, Mysore State; and (5) Regional College of Education, Bhopal, Madhya Pradesh,

The College of Education at Kurukshetra started in 1960, offers a four-year integrated course after Matriculation or High School Leaving Examination leading to a B.A. (Edn.) degree. The four regional colleges of education, which were started in 1963 and 1964 by the National Council of Educational Research and Training (N.C.E.R.T.) offer a four-year integrated course after the P.U.C. or Higher Secondary Examination leading to a B.Sc.Ed., or B.Tech.Ed., or B.Tech.B.Ed., degree.

Departments of Education Attached to Arts and Science Colleges

Some of the older teachers colleges were first started as separate departments of arts and science colleges. For example, the B.T. Department of Mysore University was started in 1925 in the Maharaja's College at Mysore which was a premier arts college of the University. The B.T. Department which had a strength of about 40 students was what was described as a "one-room show". It had a small staff of 3 or 4 persons of its own and the Professor of Psychology of the Department of Psychology was also teaching Educational Psychology to the B.T. students. This "one-room show" which was considered to be "cribbed, cabined and confined" had its own advantages and disadvantages. Educational Psychology was taught by one of the greatest psychologists of India (the late Dr. M.V. Gopala-swami) with a rare insight into the psychological aspects of education

although he was technically speaking "untrained". The psychological laboratory of the college, *the best* in the country at that time, was freely made use of by the B.T. students. The B.T. students lived in the invigorating environment of an arts college throbbing with life and vitality. They came into intellectual contact with students and professors of other disciplines. The social life was full, rich and varied as is usual in an arts or science college. Even in the hostels the B.T. students lived and studied with undergraduate students, honours students and post-graduate scholars in the M.A. classes. Although there was a separate B.T. library, the entire library of the college was fully at the disposal of the B.T. students. In sports and games and other co-curricular activities also the B.T. students were a part and parcel of the college although some of them who were deputed teachers, were old enough to be fathers of the students in the undergraduate classes. The B.T. students imbibed the traditions and conventions of the college and took a legitimate pride in their Alma Mater.

On the other hand, it must be admitted that the Education Department had no opportunity to grow and develop and continued to be a very small and almost insignificant part of the large arts college. Education was a part of the Faculty of Arts and no attempts were made either to increase the size of the Department or to start post-graduate courses in Education. It continued to be a one-room show for a long period of 22 years. It was only after 1947 when a separate teachers' college was established in Mysore, that steps were taken to institute a separate Faculty of Education in the University. The Teachers' College grew and developed not only in size but also in the variety of courses. Evening courses for the B.Ed. degree, Summer Courses in Education for teachers of arts, science, commerce, medical and engineering colleges and part-time and full-time courses for the M.Ed. degree were all started. Practising high and middle schools were attached to the college and placed under the full control of the principal of the college. The library was expanded considerably and a good audio-visual section was added. Later on a Department of Extension Services was also started by the Ministry of Education in the college. The Teachers' College came into its own and was put prominently on the University map. A similar development must have taken place in the case of many other teachers' colleges in other parts of India. Nevertheless we have about 50 such Departments of Education attached to arts and science colleges in India to-day, most of them being in the Uttar Pradesh. Generally speaking they are in a very unsatisfactory condition. They have no demonstration schools and many of them employ part-time lecturers only. Far from being efficient teacher training institutions, they are in most cases only sources of additional income to the managements.

Independent One-Year Teachers' Colleges

Although the establishment of independent teachers' colleges has been a welcome development in some respects and although there are some excellent teachers' colleges in India today, the average teachers' college is not an institution of which we can be proud of. The typical college has an enrolment of much less than 100 students and has as few as six to eight members on its teaching staff. Most of the colleges are poorly housed and inadequately equipped and are non-residential in nature although some of them provide hostel accommodation to some of their students. Most of them do not have demonstration or practising schools of their own. Very few have psychological laboratories and an insignificant number have Science laboratories attached to them. The courses offered invariably cover only the professional aspects of teacher education based on the assumption that General Education and the knowledge of subject-matter required by a teacher have already been acquired in the arts or science college. Most of the colleges offer courses in Methods of Teaching : Languages, Physical and Biological Sciences, Mathematics, History, Geography, etc. Some offer subjects like Home Science and Commerce and the number offering subjects like Agriculture, Technology, Fine Arts and Music is small. Arrangements for Practice Teaching vary considerably and are on the whole unsatisfactory. The B.Ed. Examination is mainly an external examination consisting of 4 to 6 theory papers and an examination on Practice Teaching. Some sporadic attempts have been made to introduce internal assessment of some sort. But as a rule, examinations have remained unreformed in teachers' colleges.

Admission requirements vary to some extent from college to college except for the fact that all of them insist on a Bachelor's Degree. Some require previous teaching experience of about 100 days. Interviews are usually held before the students are admitted. But the typical teachers' college in the country admits any graduate that seeks admission. As a matter of fact, a recent study has shown that nearly 85 per cent of all the students admitted to the teachers' colleges are third divisioners in their Bachelor's Degree examination.

Need for Four-Year Teachers' Colleges¹

Since the average size of a teachers' college in India is less than 100 as stated above with a staff of about 6 to 8, there is hardly any scope for specialization. There are instances where a single teacher handles as many as 2 or 3 professional subjects and sometimes more than one subject under Methods of Teaching. In extreme cases, this may result in a lecturer teaching a subject under Methods although

1. Much of this material has been taken from "Four-year Courses in Teacher Education" published by the National Association of Teacher Educators, 1966.

he has not studied that subject himself at the degree level. Furthermore, a small college will not permit the organisation of certain types of activities and programmes, both curricular and co-curricular. Some lecturers do not have a full load of work and hence some colleges appoint only part-time lecturers in some subjects. These drawbacks show the need for a larger teachers' college with a larger staff. But a large teachers' college with an annual intake of about 200-300 students would involve many administrative problems especially in connection with the arrangements for Practice Teaching. Such colleges would have to be located in large cities only where the required number of high schools would be available for Practice Teaching. Or a system of off-campus Practice Teaching would have to be introduced which would undoubtedly present some administrative difficulties. Wherever circumstances are favourable and the difficulties can be overcome, it would be desirable to have larger teachers' colleges by increasing the annual intake. This would certainly improve the efficiency of our colleges and incidentally reduce the cost per student also.

The size of a teachers' college could also be increased in one or two other ways. We may lengthen the duration of the B.Ed. course itself to two years or we may set up 4-year colleges offering integrated courses like the Kurukshetra College or the Regional Colleges of Education. It has been realized by teacher educators that the short period of one year's training which actually amounts to 8 or 9 months' training is insufficient to develop insight, interest and maturity in educational theory and practice. In a crowded programme of such a short duration, the trainee is not in a position to assimilate the basic concepts of education and develop a mastery over them. Any attempt directed towards qualitative improvement in the field is bound to remain a far cry as long as the duration of training is as short as 8 or 9 months. A programme of teacher education spread over a longer period will provide greater opportunities to inculcate proper professional attitudes among prospective teachers and develop sufficient maturity and insight in the process of education. But the lengthening of the B.Ed. course itself to two years is not considered feasible by any educators in India in the present circumstances. The only alternative would be to introduce an integrated course of 4 years.

The four-year college would not only be a large college with all its advantages but it would also give a longer period over which we could develop the necessary professional attitudes and interests. The college would also be in a position to establish healthy conventions and traditions and provide a continuing educational environment in the institution. As things stand at present the entire student population changes completely every year and there is no contact between the student groups of consecutive years. Consequently the teachers' colleges lack, by and large, an individuality of their own.

The four-year college would help us to rectify many of the existing defects in our one-year independent training colleges. During the past two decades or so the purposes of secondary education have been widened and deepened in order to meet the requirements of the newly emerging Indian society after Independence. New subjects have been added to the curriculum and the content matter of existing subjects has been modified to a great extent. A variety of co-curricular activities and audio-visual aids have been introduced. Improved evaluation procedures and guidance programmes have also been introduced in varying degrees in secondary schools in the country. These and many other changes have created an urgent need to equip the teacher with new skills and competencies in order to carry out the programmes of secondary schools successfully. It has, however, been recognized by all concerned that the teachers' colleges, by and large, have not been able to modify their programmes in the light of these new requirements. Even the well-equipped training colleges, with sufficiently qualified staff, find it difficult to prepare teachers adequately in all respects. It has been found increasingly difficult by teachers' colleges during the past few years to adapt their curriculum in the light of the new developments in education in general and secondary education in particular. Their pedagogical programmes have already become overcrowded and little is being accomplished by way of improving the content competence and general knowledge background of the prospective teacher. On account of these difficulties many teacher educators have often expressed the view that the pattern of teacher education needs a thorough reorganisation by spreading it over a longer period of time and integrating it with the study of academic subjects.

The competence of the teacher in the content of the subjects that he is assigned to teach plays a very significant role in determining his success in teaching. The pedagogical skills can be put into effective use by the teacher only when he has got adequate subject-matter competence. With the enrichment of the school curricula in recent years, the subject matter competence has become all the more necessary. The assumption that a B.A. or B.Sc. degree gives adequate competence in subject-matter to teach in secondary schools is seriously questioned nowadays by educationists. It is felt that it is necessary to teach and learn these subjects from the point of view of the prospective teacher without reducing the quantum of content in any way. This would necessitate an orientation of these subjects towards teacher education.

Even if we assume that a B.A. or B.Sc. degree in a subject gives adequate competence we must not overlook the fact that all our secondary school teachers do not have a degree in the subject or subjects which they are teaching. It is not uncommon to find teachers teaching subjects like Geography and English although they have not specialized in those subjects at the degree level. Most teachers in secondary schools have to teach at least two subjects

whereas many of them do not have content competence to handle two school subjects successfully. This results in lowering of educational standards. In a four-year programme of teacher education, however, it is possible to enable the prospective teacher to major in two school subjects and thereby develop sufficient mastery over the subject matter that he has to teach. The four-year programme could also become useful in providing integrated subject-matter in certain areas such as Social Studies and General Science. As we are aware these subjects are at present taught by persons who have competence in only one or two of the various subjects which constitute these integrated subjects. Under this programme, the prospective teacher will have a clear purpose before him while learning subject-matter and the subject-matter itself will be oriented to teacher education.

In addition to the need for content specialization in two school subjects, there is undoubtedly a need for the teacher to acquire an adequate quantum of General Education. It is true that a university degree does imply the possession of some amount of General Education. But a teacher who is charged with the sacred responsibility of guiding the physical, mental, social and moral development of children should have a more substantial amount of General Education. It is very desirable that the teacher obtains a broad-based General Education in socio-economic, cultural and scientific fields so that he may be able to understand the implications of these areas of human knowledge for secondary education. He will also be able to interpret new developments in these fields for deriving implications for curricular and instructional changes. Moreover, such a broad-based General Education is likely to enable the teacher to inculcate varied interests among students. He will be able to view his subjects of specialization in a wider perspective and develop his instructional programme more realistically. But there is no scope in the existing one-year teachers' colleges for the trainee to acquire any General Education because the time is inadequate even for a comprehensive pedagogical education. Such General Education can be provided if the programme of teacher education is spread over a period of four years.

It has been observed that many persons decide to enter the teaching profession after completing their degree course and after having failed to secure more lucrative jobs elsewhere. It is difficult to raise the level of teacher education as well as secondary education with the help of "left overs" who join the training college. An attempt should, therefore, be made to attract the right type of students quite early to the teaching profession and provide them sufficient opportunities to develop proper attitudes towards the profession which will go a long way in improving secondary education. The four-year programme would automatically have a wider catchment area and, therefore, would widen the scope of selecting students of the desired quality and calibre. The students would be selected after they complete the pre-university or higher secondary course. Provi

sion could also be made to select some prospective teachers even at the time they enter the pre-university course.

The unique character of the teaching profession demands an interdisciplinary approach in the preparation of the teacher. But in the present pattern of teacher education, training colleges work in isolation from other faculties of the universities in most states. There is little contact between the staff of teachers colleges and that of the neighbouring college of arts and science. It is necessary to build a closer relationship between the teachers teaching pedagogical subjects and those teaching arts and science subjects. The informal exchange of ideas and practices through constant collaboration among these teachers is bound to prove useful to all. Such a contact will eliminate the difference between the status of the faculty of teachers' colleges and that of the faculty of other colleges wherever such a difference exists. This can be accomplished satisfactorily in a four-year programme of teacher education, if it is arranged in an arts and science college setting.

On account of the present pattern of teacher training, the colleges are handicapped even in the field of inservice programmes for teachers. First of all, their staff is limited and just adequate for its small enrolment. Hence the college teachers get over-burdened when they are drawn for inservice teacher education programmes very frequently. This is one of the difficulties frequently put forward by the training college teachers during the nation-wide assessment of Departments of Extension Services undertaken by the Directorate of Extension Programmes for Secondary Education in 1964-66. Moreover, most of the inservice programmes are confined to methodology of teaching subjects, whereas there is an equally acute need for similar programmes in content matter at a time when there is an explosion of knowledge as in the sciences. But the faculty of the teachers' college, by and large, has no scope to remain up-to-date in the subject-matter and the college can hardly claim any expertise in this area. Consequently, the college is not in a position to extend its inservice programme for the improvement of content competence of the teachers. It is also not always possible to seek the active and continuous cooperation of the teachers of other arts and science colleges for obvious reasons. The four-year degree programme will have a distinct advantage in this respect. The college will have an easy access to subject-matter specialists and hence inservice programmes for refreshing teachers in content areas can be frequently arranged. This again will lead to qualitative improvement of classroom instruction. The faculty of the four-year college will also have a chance to remain up-to-date in subject-matter through an intimate contact with the other constituent colleges. Some of them may (they may even be required to) even choose to teach subject-matter in arts and science colleges and break the rigid barrier between these faculties that exists at present. All these changes should prove effective.

tive in the improvement of pre-service as well as in-service programmes for teacher education.

Four-Year Colleges in the U.S.A.

The four-year programmes of teacher education had their origin in the U.S.A., where the two-year normal schools developed during the last 100 years into three-year and then four-year teachers colleges and later into multipurpose colleges offering both liberal arts and teachers education. The secondary school teachers are generally prepared by liberal arts or teachers' colleges which offer a regular four-year programme leading to the Bachelor of Arts or Bachelor of Science degrees. These prospective teachers have a major or field of specialization just like other students. The difference between the bachelor's programme for future secondary school teachers and that for the others is that in the former, a certain number of courses in "education" or pedagogy are required, such as history of education, philosophy of education, educational psychology, practice teaching, etc. Some college students who intend to enter secondary school teaching, prefer to follow the normal bachelor's degree programme omitting the education courses and then enter a graduate school of education and take the complete pedagogic training in one year.

At the commencement of the 20th century, under the influence of the newly blossoming science of psychology, teacher education began to lay emphasis on pedagogy, history of education, educational psychology, educational measurement and principles of child growth at the expense of content matter. This shift in emphasis was carried to an extent, which for many seemed to forebode an undesirable imbalance in teacher education curricula. "The multiplication of technical as opposed to subject-matter requirements, either in addition to or at the expense of the latter, became an acute source of concern. Many were led to the conclusion that teacher education was in danger of becoming, if indeed it had not already become, a programme predominantly methodological, with little or no concern for the ideas and information which were to be taught. The contemporary tendency seems rather markedly to be one of trying to arrive at a healthy and functional balance in the preparation of teachers as between subject-matter knowledge and pedagogical competence. There is evident increasing support for the thesis that a well-qualified teacher requires both knowledge of subject and understanding of the various facets of the teaching-learning process".¹

For several decades an "academic civil war" as Conant calls it has been going on in the U.S.A. between the professors in the traditional disciplines—languages, history, literature, science and the like—and the members of schools or departments of education. Each

1. Gordon, C. Lee : *An-Introduction to Education in Modern America*, P. 345.

group has in the past insisted that it alone held the true keys to sound teaching and that most, if not all, the defects of modern education are the direct result of an over-emphasis on the other's special concern. The subject-matter specialist accused the professional educator of encouraging an intellectual shallowness and a lack of mental discipline by his stress on methodology and psychology. The educator on the other hand found the subject-matter specialist unable to adjust to the individual differences present in his students. The educator saw the academician as unable to adjust to the demands of a changing culture, probably due to an inadequate background of training or experience in the science and method, the philosophy and psychology of education. Fortunately there is a growing acceptance of the view that the academic and the pedagogical aspects are integral and interdependent parts of the total process. The current tendencies in teacher education demand that teachers know more about children and youth, their needs, interests, desires and capacities and about the ways and means of teaching them most effectively. There is also a simultaneous demand that the teachers shall acquire greater competence in the field of their major interest than has been required heretofore.

In addition to the obvious need for developing subject-matter competency and technical expertness, a sound teacher education programme must give emphasis to one other vital consideration. The teacher candidate must be balanced in his background. His collegiate experience must allow for contact with the arts, the humanities and the sciences, just as the modern school will expect him to integrate his teaching, no matter what the field may be. There is now general agreement that the college education of all teachers should include a substantial proportion, perhaps as much as one-third or one-half, of what is called 'General Education'. This is intended to mean an introduction to study in the arts, the social studies and the sciences at the college level. For those planning to teach in the secondary schools there is agreement that at least one-third of their four-year programme should be devoted to concentrated study in a particular academic area such as history or physics or English literature. There is also agreement on the part of many scholars that roughly one-sixth time should be devoted to preparation for teaching, including both the theoretical and practical aspects. In the land-grant colleges, for instance, the time apportioned for liberal arts and sciences is 35-45 per cent, for specialization in a teaching field or fields, 40-50 per cent and for pedagogical courses 16 per cent for secondary and 22 per cent for elementary teachers. This allotment of time had led to a keen competition for the student's time among the various professors and it has led to the suggestion that the time for preparation be lengthened from four to five-years to provide adequately both for content competence and professional efficiency. It is widely believed that the five-year programme will become the pattern of the future for high school teachers. Already 24 of the 67

Land Grant Colleges in the U.S.A. offer a fifth year of study as an optional part of the pre-service preparation for teaching.

The five-year programme has the following advantages:

1. Provision for broader study in the liberal arts;
2. Increase in specialization in the teaching field;
3. The provision of professionalized training as a separate step beyond the work for the bachelor's degree; and
4. In some cases the inclusion of an internship under a "master teacher" or an instructional team in place of the usual type of student teaching."¹

In a thought provoking article on "The Teacher Education We Need" in the *Journal of Teacher Education*, Dr. Kimbal Wiles emphasizes the need for an integrated programme of teacher education and includes the following among the essential characteristics of such a programme:

1. Teacher education should be a total institution programme. We should not expect teachers to be prepared exclusively by an education department or college. The reputation of the entire institution should be at stake in each teacher produced, and the total resources of that institution should be available to develop the kind of teacher desired. Unless there is planning with all the departments participating in the preparation of the teacher, the programme will not be the one we need.
2. Content courses should make sense in terms of a discipline and the Public School Curriculum. If it is desired that a teacher know the structure of the discipline he is teaching, it is necessary that the courses he takes add up to something more than the minimum number of hours in the field necessary for certification. The specialists in the discipline must develop a programme of courses which give the structure of the discipline and the necessary investigative skills. When the student finishes the courses required, he should know the dimensions of the field well enough to deal with the specific problems included in the public school curriculum in terms of the basic generalizations of the discipline.
3. Teacher education requires a different content in the professional sequences. In the courses that we know as foundations of education, tradition has built up a requirement of a series of courses which have little meaning to the begin-

1. Hansen, John, H. : *The Journal of Teacher Education*, Vol. XV Number 2, Summer 1966. P. 214.

ning teacher. For example, what do philosophy of education, social foundations of education and psychological foundations of education really mean? What do they give that is essential for a person starting to teach? Much more basic to a teacher in preparation is an understanding of communication, human relations, group development, inter-group inter-action leadership, community power structure and personality dynamics. Foundation of education should be those understandings which enable a teacher to perform more effectively in the classroom and faculty.

4. Public School personnel should become effective partners in the Teacher Education process. More and more responsibility for supervision of internships must be assumed by the field. Specific persons must be identified with the supervision of interns in a given teacher education programme. Continuous planning among on-campus and off-campus personnel is essential. In addition, teacher education institutions need advisory boards consisting in part of practitioners. The representatives of the public schools could feed back a continuous evaluation of the quality of the product.¹

The Four-Year College of Education at Kurukshetra

Two significant developments have taken place in recent years in India in the direction of establishing four-year programmes for teacher education. The College of Education at Kurukshetra, started in 1960, is unique in many respects. It is the only college of education which admits students after the Matriculation Examination and which offers a four-year course. Only first class Matriculates are admitted and it is almost entirely residential. No tuition fee is charged and fifty per cent of the students receive a stipend of Rs. 25 p.m. The students pursue an integrated course and complete in four years the requirements of a B.A. or B.Sc. Degree plus the B.Ed. degree. They take all the papers set for the B.A. or B.Sc. degree examination of Kurukshetra University along with other students studying in the Arts and Science colleges. They also take four theory papers in Education and an Examination in Practice Teaching. The State Education Department is treating these graduates on par with trained graduates for purposes of appointment in secondary schools. However, no preference is given to these candidates.

It will be seen that in this college, the students save one year as compared with the students of traditional teachers' colleges who take five years after Matriculation to obtain a B.A. or B.Sc. degree and a B.Ed. degree. It is claimed that the saving of one year has been made possible through a proper integration of courses

1. Kimball Wiles: *The Journal of Teacher Education*, Vol. XVII, No. 2, Summer 1966. Pp. 263-268.

and by the residential nature of the college which enables the students to put in longer working hours on each day and by the larger number of working days in each year which the college has prescribed. Even so there is a general feeling that efficiency has been sacrificed for the sake of saving one year. This is perhaps the reason why no other university either in Punjab or outside has recognized this B.A. or B.Sc. in Education as equivalent to B.A. or B.Sc. plus B.Ed. for purposes of admission to the M.A. or M.Sc. courses. No systematic study has been done by anybody concerned regarding the quality of the products to warrant the assumption that these students are inferior in any way to the graduates of arts and science colleges in content competence and of the traditional teachers' colleges in professional competence. There is a real need for a comprehensive study of the comparative merits of the products of these two types of courses. The study should involve an adequate number of students selected from as many colleges as possible and should cover all aspects of the training programme, *viz.*, knowledge of content and professional competence, both in theory and practice. Some essential non-cognitive traits like interests and attitudes should also be included. The study should preferably be spread over a number of years and include some follow-up studies in the actual classroom situation involving headmasters and inspecting officers. The results of such a study would have far-reaching implications in the field of teacher education in India.

There is, however, some evidence to show that these students do better than the other students of arts and science colleges in the B.A. and B.Sc. examinations as judged by the Kurukshetra University results. Regarding their comparative merits in professional competence, it may be mentioned here that the Punjab Education Department appointed a committee to make a pilot study of the products of the one-year colleges of education of the State and the four-year college of education. The study which was admittedly of an exploratory nature and not intended to yield any reliable results indicated, however, that the products of the four-year college appeared to be not inferior to the products of one-year colleges in professional competence. In some respects they tended to be somewhat superior. For example, they seemed to have a better professional sense and a more lively interest in education than the other group.

Regional Colleges of Education

The Secondary Education Commission (1952-53) found the high schools of the country working as "single-track institutions offering academic instruction in a limited number of subjects which did not meet the varying abilities, aptitudes and interests of an over-increasing secondary school population". The Commission, therefore, suggested diversification of courses and the introduction of many prac-

tical streams in the secondary school curriculum. The Central Advisory Board of Education accepted this recommendation in 1954 and the Government of India promoted the establishment of multipurpose secondary schools in the country. By the end of the Third Plan period their number was about 2,500 or one-tenth of the total number of secondary schools in the country. The development of multipurpose education on 'proper lines required, among other things, an adequate supply of qualified and trained teachers especially in the practical courses and provision for pre-service training'. The Planning Commission suggested that an integrated teacher training programme for the multipurpose schools should be undertaken both in the practical and in the scientific subjects.

The Ministry of Education, Government of India, accordingly decided to establish four Regional Colleges of Education in the country for the training of teachers required for multipurpose schools in particular and secondary schools in general. The project was transferred to the National Council of Educational Research and Training, an autonomous body set up by the Ministry of Education in 1961. The four colleges which were started in 1963 and 1964 serve the following areas:

1. REGIONAL COLLEGE OF EDUCATION, AJMER:
Northern Region—Haryana, Jammu & Kashmir, Punjab, Rajasthan, Uttar Pradesh, Delhi and Himachal Pradesh.
2. REGIONAL COLLEGE OF EDUCATION, BHUBANESWAR:
Eastern Region—Bihar, Orissa, West Bengal, Assam, Nagaland, Manipur, Tripura and N.E.F.A.
3. REGIONAL COLLEGE OF EDUCATION, BHOPAL:
Western Region—Maharashtra, Madhya Pradesh, Gujarat and Goa.
4. REGIONAL COLLEGE OF EDUCATION, MYSORE :
Southern Region—Andhra Pradesh, Mysore, Madras, Kerala and Pondicherry.

The main objectives of the Regional Colleges of Education are: (1) To develop and provide a programme of teacher education for the multipurpose schools and to prepare teachers of technical subjects, science, crafts, agriculture, commerce, home science and fine arts; (2) To provide inservice courses for the existing teachers of the practical subjects in multipurpose schools; (3) To provide inservice programmes and field services for teachers, supervisors and administrators concerned with the multipurpose schools in the region in which it is located; (4) To organize and develop a model demonstration multipurpose school; (5) To function as a regional centre

for programmes of inservice education and field services for secondary schools in general; (6) To undertake pilot studies and research projects in the methods of teaching, in relation to the multipurpose schools as well as the general secondary schools; (7) To evolve and try out improved patterns of teacher education; (8) To prepare and disseminate instructional materials for secondary schools in general and multipurpose schools in particular; and (9) To collaborate with other institutions in initiating and promoting improved methods and practices, to function as a clearing house in this regard of children, for observation and study of the teaching process, for living as a part of a school and for teaching in a class-room.¹

The Regional Colleges of Education are affiliated to the universities in whose jurisdiction they are situated and the degrees are recognised as equivalent to the Bachelor's Degree plus the B.Ed. degree.

The four-year programme for prospective teachers is based on a careful study of the needs of secondary schools in India and of the recommendations of several study committees. It differs from the traditional course in the following ways:

1. It is a coordinated four-year course as opposed to a three-year degree course plus a one-year professional course programme with the main object of preparing teachers of science and technical subjects for the secondary schools.
2. General Education, professional education and content are integrated in the four-year sequence. Professional education starts with psychology in the second year and terminates with "internship" in teaching in the fourth year. Care has been taken to maintain a balance between the time devoted to general education, professional education and content.
3. Theory and practice are viewed as a single continuing process and not as two separate activities.²

General education is included in the four-year programme to introduce the student to the national and generally to provide leadership.³

The Regional Colleges of Education offer the following types of courses: (1) Four-year course of teacher education in Science, Technology and English to those who have passed the P.U.C. or

1. N.C.E.R.T. Plan & Programme : *Regional Colleges of Education*. Pp. 4-5.

2. *Ibid.* P. 54.

3. *Ibid.* Pp. 6-7.

Higher Secondary Examination; and (2) One-year courses of Teacher Education in Home Science, Fine Arts, Commerce, Agriculture, Science and Technology to University graduates. The assumptions underlying the programme are :

1. The professional competence required of the teacher is achieved through an organized programme of learning experiences; it is not merely a by-product of becoming a well educated person.

The preparation of the teacher requires much more than a collection of courses and degrees. It should focus on what teachers do as individuals and as members of the profession, and should be concerned with the development of the teacher's personality.

2. The education of a teacher based broadly on a foundation of general education should include a thorough mastery of subject-matter so as to give him an insight into its structure and inter-relationships, and professional preparation.

The secondary school teacher needs, on the one hand, the higher education required to provide mastery of the basic skills and concepts which underlie mastery of subject-matter, and on the other hand, he needs the preparation which enables him to deal expertly with the problems faced by a secondary school teacher. These problems range from how to evaluate achievement, to how to teach advanced subject-matter concepts.

3. General education which contributes to growth as a person, specialization which provides scholarly knowledge of the subjects to be taught, and professional education which leads to understanding and skill in professional performance, must be integrated into a total programme.

Functionally general education, specialization and professional education are not to be thought of as compartmentalized and isolated fields of study. Each area leads on by natural gradation to others, and what one gets from one area is reinforced by what is derived from others.

4. The prospective teacher must assume responsibility for his own education in an increasing measure.

The goals of teacher education cannot be achieved unless the learner takes greater responsibility for his own education. Opportunity for independent study must be a built-in part of a teacher education programme, for the spirit of

enquiry and investigation depends upon time for reflection and upon a wide range of opportunities for exercising individual initiative.

5. Opportunities to work with adolescent learners must be an integral part of the professional preparation of the secondary school teacher.

The student must spend time with adolescent learners so that he may learn how to help them. Provision must, therefore, be made for the study heritage, man's creative expression and thought and also to world of recreation.

The curricular schemes and time allotments are as follows in the four-year science course:

TABLE 21

CURRICULUM SCHEMES IN REGIONAL COLLEGES

Year	Periods per week (Theory and Practice)				Total
	I	II	III	IV	
Content (Major Science)	9	9	12	18	48
Content (Minor and Ancillary)	16	15-16	0	0	31-32
General Education	18	18	15	9	60
Professional Education	0	3	14	15	32
Total	43	45-46	41	43	172-173

N.B.—*Major Science* includes (1) Physics and Chemistry, or (2) Physics and Mathematics, or (3) Biological Sciences.

Minor Science includes (1) Mathematics or (2) Physical Sciences.

Ancillary includes (1) (Biological Sciences) or (Mathematics, Physiology and Hygiene) and (2) Workshop Practice.

General Education includes :

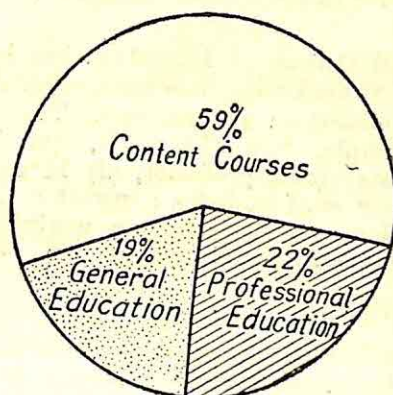
- (1) English
- (2) Regional Language
- (3) Social Sciences
- (4) Health, Physical Education and Recreation.

Professional Education includes :

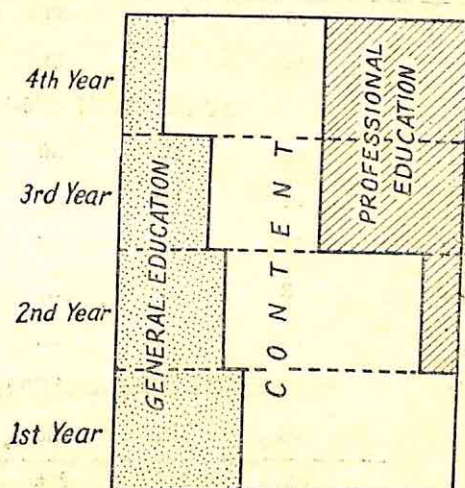
- (1) General and Educational Psychology
- (2) Workshop in Teaching
- (3) Foundations and Problems of Education
- (4) Special Methods and Student Teaching
- (5) Internship in Teaching.

The Charts show the relative weightage given to each aspect of the programme in the course as a whole and during each of the four years.

3. Year Science Programme



Programme of courses in Regional Colleges



Allocation of Time to Courses in Regional Colleges

Each college campus is located on a picturesque site of about 100 acres made available to the N.C.E.R.T. by the concerned State Government. The campus consists of a large number of buildings for the college, its library, the demonstration multipurpose high school, men's and women's hostels, staff quarters, agricultural farm, workshops, laboratories, etc., etc. The colleges have excellent library facilities. The Regional College at Bhubaneshwar, for example, has a library with over 18,000 books although it was started only three years ago.

Each Regional College of Education has been provided with an adequate qualified staff to handle the content, General Education and professional education programmes. The college at Bhubaneshwar, for example, has the staff, (a) 1 principal, (b) 2 American consultants, (c) 1 professor, (d) 11 readers and (e) 28 lecturers. The other staff includes a director and an instructor of physical education, one artist, one workshop superintendent, one farm superintendent, one librarian and supporting administrative staff.

The Regional Colleges of Education are expected to have an enrolment of about 700 each when they are fully developed. In the four-year courses the number will be between 40-60 in each year in each course and in the one-year courses there will be about 25 students in each course. The actual enrolment in 1965-66 in the four Regional Colleges was:

TABLE 22
ENROLMENT IN REGIONAL COLLEGES

College	Ajmer	Bhopal	Bhuba- neshwar	Mysore	Total
4-year Science	75	75	89	63*	302
4-year Technology	139	26*	73	52*	290
4-year English	STARTED IN 1966-1967				
1-year Science	33	15	50	66	164
1-year Agriculture	24	10*	3	5	42
1-year Commerce	16	13	14	25	68
1-year Home Science	8	...	...	15*	23
1-year Fine Arts	...	8*	...	...	8
1-year Technology	NOT YET STARTED				
Other Courses	66	19	26	...	111
Total	361	166	255	226	1,008

*Indicates courses started in 1965-1966.

The college year consists of 222 working days (exclusive of examinations) made up of 37 six-day weeks. Classes are scheduled from Monday to Friday. Saturday mornings are set aside for co-curricular, physical and other activities. Each class period is of 45 minutes duration. Health, physical education and recreation are given for 30 minutes in the morning and 70 minutes in the evening for 5 days in the week. The detailed time-table of the Regional College at Bhubaneshwar is given below:—

TABLE 23
DAILY TIME-TABLE, REGIONAL COLLEGE, BHUBANESHWAR

Monday to Friday	Time
Health and Physical Development	6.15 to 6.45 a.m.
Five periods of 45 minutes each with 5 minutes break-in-between	8.00 to 12.05 p.m.
Lunch	12.05 to 1.20 p.m.
Four periods of 45 minutes each with 5 minutes break in-between	1.20 to 4.35 p.m.
Health, Physical Education and Recreation	5.50 to 7.00 p.m.

Admission is based on good academic record and aptitude for the teaching profession as well as on an interview. In the Regional College of Education, Mysore, for example, only students with about 45 per cent marks in their P.U.C. Examination are invited for the interview. Many students with much more than 60 per cent of the marks were also among the candidates selected. Selection to the college implies admission only. Retention in the programme will depend on the student's performance from year to year which will be judged by external examinations and periodic internal evaluation. In 1966, a more systematic and scientific procedure of selection has been introduced.

The Regional Colleges charge no tuition fees at all. On the other hand, each student is given a stipend of Rs. 75 p.m. in the first three years of the four-year courses and of Rs. 100 p.m. in the fourth and final year. In the one-year courses also stipends of Rs. 75 each per mensem are given to all students including those deputed by the State Education Departments. Separate hostels are provided for men and women and residence in the hostels is compulsory except in special circumstances.

The scheme of evaluation is based on the assumption that "teaching, learning and examining constitute an indissoluble trinity of functions in an academic community, and they must be related to

each other and to the objective which the educational process is desired to achieve".¹ Sufficient weightage is given to internal assessment and there is a staggering of examinations so as to distribute their load over the four years. A certain amount of flexibility has been provided for in the rules without sacrificing standards.

The programme of practice teaching is known as Internship in Teaching under the Regional College of Education scheme. Each student is to spend six to eight weeks in a school as a full-time student-teacher participating in all activities in general and specialising in teaching in his own major area. He has to observe the different aspects of organisation of the school and participate both in the curricular and co-curricular activities. One special feature of the scheme is that the student is attached to a senior teacher of the faculty who is known as the co-operating teacher, with whom the student holds a number of conferences with reference to his teaching work. Supervisors from the college also visit the schools and give guidance to the students. The schools are selected for internship in consultation with the Departments of Education of the four States. The headmasters of these schools visit the college campus for a two to three days conference with the college faculty before the period of internship. Workshops for the co-operating teachers also are being organized in order to acquaint them with the nature of help to be given to the student-teachers.

Before the students are sent out to the school for Internship, an intensive programme of training is given to the students in the campus utilizing the resources of the demonstration schools and some of the city schools. On the students returning from Internship, special conferences of post-internship activities are organised so as to review the programme and relate their experiences to the teaching of Theory.

The Regional Colleges represent undoubtedly a welcome departure from the traditional one-year teachers' colleges on the one hand and the Kurukshetra pattern of teacher education on the other. By providing a four-year integrated course beyond the P.U.C. they have retained the total period of study at the same level as in the case of one-year teachers' colleges and have been able to command ready recognition of their degrees by the universities and State Governments. They have a large and suitably qualified staff and well-equipped libraries, laboratories, workshops and farms. Residential accommodation is provided for all their students and staff members. The instructional programmes are very well balanced and do justice to General Education, Content and Professional Education. The admission procedures have been carefully drawn up and are being improved from year to year. The evaluation scheme places the necessary emphasis on internal assessment while retaining the

1. U.G.C. *Report on Examination Reform*. New Delhi, 1962.

advantages of an external examination. The number of working days in the year and the number of working hours each day are much larger than in the traditional colleges. Although it is too early to pass any judgment on these colleges, it is reasonable to expect that the products would be better than the products of the ordinary teachers' colleges. For the first time in the history of teacher education in this country we have in these Regional Colleges examples of what a good teachers' college should be like.

These colleges which were started with the main purpose of providing competent teachers for multipurpose high schools have provision for training teachers in science, technology, agriculture, commerce, home science, and fine arts with English added in 1966-67. Other important school subjects like history, geography, regional and classical languages, etc., are not provided for. The training of such teachers continues to be the sole responsibility of one-year teachers' colleges. If a four-year course is good and necessary in fields like science and English, it would be equally desirable in other subjects also.

Some Recent Developments

The Education Commission appointed by the Government of India in 1964 has in its report, published in 1966, stressed the need for "removing the isolation of training institutions by bringing them into the direct stream of academic life of the Universities and by building up closer relations with the schools and between the training institutions preparing teachers for different levels".¹ The Commission has also stressed the need for provision in the training programme, at both primary and secondary levels, for a study of subjects to be taught, in depth as well as in range. For this purpose the extension of the working days in the academic year from the existing level of 180-190 days to 230 days has been suggested. It is also recommended that this reorientation in the subject knowledge of secondary teachers should be done in collaboration with competent university departments and where necessary with the arts and science colleges doing post-graduate work. Professors and lecturers of the other faculties should co-operate with training college staff in developing and providing these courses.

Commenting on the four-year college at Kurukshetra and the Regional Colleges of Education, the Commission observe that "it is obvious that these integrated courses, even when developed to their fullest potential, can only provide a very small proportion of the total number of trained teachers required at the secondary stage on account of the heavy expenditure involved therein. We feel that it would be wrong to place an undue emphasis on such marginal experi-

1. Ministry of Education. Report of the Education Commission : Manager of Publications, Delhi, 1966. P. 68.

ments and that from the point of view of raising standards in teacher education, it would be better to concentrate on improving the professional one-year course following the first or the second degree".¹ The Commission goes on to say that such integrated courses "should be organized in universities rather than in separate institutions set up for the purpose as is now being done in the Regional Colleges of Education. Such colleges necessarily prove to be expensive as regards staffing and equipment. High quality staff do not join such institutions readily as adequate facilities to pursue studies in their special academic field or for undertaking research do not exist. While existing colleges may continue, such institutions should not be expanded. The experiment should be tried, as we have recommended, in universities having strong departments or schools of education which should work in collaboration with departments in other subjects".² The Regional Colleges of Education, which are independent colleges, suffer from isolation and do not provide for interdisciplinary contacts which as stated earlier is one of the desirable features of new teacher education institutions. Furthermore the staff of the content subjects like Science and English do not have their roots in their own departments in the university and hence it is difficult for them to draw sustenance to maintain vitality and to keep in touch with the latest developments in the field.

There can be little doubt that if four-year integrated colleges are established as independent colleges as in the case of Regional Colleges the cost per student will be exceedingly high. But the cost could be reduced considerably if they are established as integral parts of a university or of a complex of arts and science colleges so that the staff, accommodation, equipment, libraries, laboratories, hostels and other facilities could be shared and fully utilized.

The National Council of Educational Research and Training has constituted an expert committee to work out detailed schemes for preparing teachers in science and mathematics who are in short supply in the country as a whole. It has come to the conclusion that as a long-term measure good science and mathematics teachers can be produced only through the four-year integrated course because it trains teachers both in content and methodology. The products of this course would have the competency of Honours level in content in two subjects with adequate pedagogical training. The committee has proposed that such courses should be introduced under the co-operative supervision of the Department of Education and the Department of Science and all the facilities should be fully utilized by the staff and students. Five centres per year are proposed to be established so that by the end of the Fourth Five-Year Plan these courses would be available in about twenty university centres. The intake would be about 100 each year so that the centres would have 400 students each when fully developed.

1. *Ibid.* P. 73.

2. *Loc. cit.*

The Committee further decided that as a short-term measure, 'Education' should be introduced as a subject in the three-year degree courses in science with the co-operation of faculties of education. The product of this course would not be a trained teacher but a better substitute for the untrained science graduates who are teaching in our schools. If, however, he wanted to become a trained teacher, he should be given opportunity to do so through another course of one-year duration. This four-year course should be such as to give him competency in content up to Honours level with sufficient pedagogical training.

The Committee has also recommended that similar steps should be taken for humanities and integrated courses should be started in selected university centres.

In collaboration with the All-India Association of Principals of Training Colleges (now known as the Indian Association of Teacher Educators) the National Council of Educational Research and Training sponsored a Study Group to examine the existing organisation and programmes for training of secondary teachers and formulate measures that need to be undertaken in the context of the requirements of the fourth and subsequent plans. The Study Group made, among others, the following recommendations:—

1. While the one-year training course will inevitably be the normal pattern for some years to come, a beginning has now to be made for developing an integrated four-year training course of the type with which the Regional Colleges of Education are experimenting.
2. These should be started at selected centre, where facilities exist to impart academic as well as professional education side by side under the same management.
3. ...We hope that the four-year college of education will gradually become the normal pattern for the training of teachers for secondary schools in the years to come and the one-year training course will provide training facilities for those students who elect to enter the teaching profession only on the conclusion of their degree work.¹

The All-India Association of Teachers Colleges at its seventh Conference held at Mysore in June 1964 considered the report of the Study Group and recommended the starting of four-year training colleges. In pursuance of this recommendation the Association set up a Working Group in collaboration with the National Council of Educational Research and Training. The Committee discussed the need for the establishment of a four-year programme in the context

1. *Baroda Report*. P. 51.

of the nature of the existing one-year programme and has set out a general plan of action in its report published in 1966.

It is proposed that most of the existing colleges should be converted into four-year colleges in a phased manner by adding Arts and Science Departments although some of them may in addition run the one-year course for the benefit of those who decide to join the teaching profession after graduation. As far as possible, no new colleges of the one-year pattern should hereafter be started. Some of the Arts and Science colleges may be converted into four-year college by the addition of a Department of Education. Courses should be provided in such a way that every trainee specializes in two school subjects, both as majors and the content offered should be comparable to honours degree level. The curriculum should be so devised that transfer of students from Education to Arts and Science and *vice versa* may be possible. Such transfers may normally be allowed during or at the end of the first year of the programme. However, it should be possible for a student to get a transfer even at the end of the second year provided that he takes some additional courses to make up the deficiency. Provision should be made for integrated subjects like General Science and Social Science which may be offered as one of the majors. Provision should also be made for those who wish to pursue Master's and Doctorate degree courses in either pedagogical or content fields. Those who opt for an integrated subject like Social Science as one of the majors may be given scope to pursue MA. Ed. or M.Sc. Ed. courses in addition to the provision to continue further education in the other major chosen. It is envisaged that the graduates coming out of these institutions would qualify and acquire eligibility to teach subjects in the secondary and the higher secondary classes.¹

CONCLUSION

In conclusion, it may be stated that the one-year teacher education course organised as a part of an Arts or Science college gives training of poor quality and it suffers from a number of serious shortcomings and hence it is not desirable to continue it. The independent one-year teachers' college which is the most common type in existence gives fairly good training but has some shortcomings and so it is desirable to convert them in a phased manner to four-year colleges by adding Arts and Science departments. At the same time wherever it is possible a four-year programme of teacher education may be added to Arts and Science colleges. The independent four-year teachers' college of the Kurukshetra type suffers from non-recognition of its degrees by sister universities and other State Governments although the training appears *prima facie* to be quite good. The progress of the experiment may be watched carefully and a systematic study of the comparative merits of the

1. Indian Association of Teacher Education. *Four-year Courses in Teacher Education*, Delhi, 1966. p. 13.

products of this college and other types of colleges may be undertaken. The independent four-year teachers' colleges of the Regional College type give recognized training of very high quality but they are very expensive and the training is limited to a few subject areas. Such institutions may be expanded but it is not necessary to increase their number. The most desirable pattern appears to be the one recommended by the expert committee appointed by the Indian Association of Teacher Educators, *viz.*, a four-year college or Department of Education situated in a university campus or in a complex of Arts and Science colleges offering an integrated course (of General Education, Content and Professional Education) leading to a B.A. (Ed.), or B.Sc. (Ed.), degree with opportunities for further study either in the content field or professional field. Such a college would be in a position not only to give efficient training but also to provide for the much needed interdisciplinary contact and to remove the Teacher Education programme out of the isolation from which it suffers today.

*J. K. Shukla***BACKGROUND**

The realization in the field of education for the improvement of practical and vocational efficiency of school pupils so that they may play their part in the building up of economic prosperity of the country, has been keenly recognized after the attainment of Independence. In order to enable our schools to implement this realization, it was felt that the trend for literary, book-ridden curricula should be replaced by a curricula involving practical subjects like commerce, agriculture, engineering, home science, etc. Secondary schools should no longer be single-track institutions but should offer a variety of courses and programmes which would include both liberal or general and vocational-technical subjects. It is also realised that these special practical subjects can also contribute, if rightly taught, to the all-round education of the students making them productive, cooperative, well-balanced and useful members of the society. As far back as 1882, the Hunter Commission made a special recommendation that the upper classes of the high schools should have two diversions—one leading to the entrance examination of universities, the other of a more practical character intended to fit youths for commercial or other non-literary pursuits. The Hartog Committee of 1929 specifically recommended more diversified curricula in the schools and suggested the diversion of more boys to industrial and commercial careers at the end of the middle stage, for which provisions should be made by alternative courses preparatory to special instruction in technical and industrial schools. The Sapru Committee appointed by the U. P. Government in 1934 also recommended that the secondary stage should be made more practical and complete in itself and more closely related to the vocational requirements of different types of students. The Committee suggested that side by side with the general course leading to the university there should be parallel courses offering instruction in technical, commercial, industrial and other vocational subjects. The Abbot-Wood Report (1936-37) strongly recommended the complete hierarchy of vocational institutions, side by side with institutions imparting general education. As a result of this, polytechnics, technical schools, commercial schools and agriculture schools conducting non-literary courses were started in various provinces. The Sargent Report of 1944 while suggesting the reorganisation of high schools made mention of two types—(1) the academic high schools, and (2) technical high schools. The need for an introduction of variety of courses at the secondary school level has been pointed out by practically all the important commissions and committees, the latest being

the Secondary Education Commission's Report of 1952. The Commission found the high schools of the country working as 'single-track' institutions offering academic instruction in a limited number of subjects which did not meet the varying abilities, aptitudes and interests of an increasing secondary school population. The change in socio-economic structure of the country also demanded a radical change in the nature of courses offered by the schools. The growing emphasis on industrialisation led the Secondary Education Commission to emphasise a special function of secondary education to provide the country with the second line of its leaders in all walks of national life. The establishment of multipurpose schools in the country came, therefore, as a natural corollary of the objectives enunciated by the Commission. The Third Five Year Plan pointed out that "the rapid pace of industrialization during the last ten years has been accompanied by significant changes in the occupational structure of industrial employment. Industry now recruits persons who would formerly have been absorbed in 'white-collar' employment. Newer industries like iron and steel, chemicals, petroleum refining, general and electrical engineering, rubber tyres, aluminium etc., are being developed relatively faster than older industries such as cotton textiles, jute and tea. The older industries in turn, with an eye on meeting competition in the international market, have introduced schemes of rationalisation. Expansion programmes in industries, such as iron and steel, chemicals etc., involve the application of the latest and most efficient production techniques and, consequently, require a more technically qualified group of operatives. Increasing mechanization in coal mining also requires personnel of a higher calibre than the older type of recruits in that industry. These developments may be expected to lead to larger employment opportunities for the educated. In judging the future prospects for the educated, this changing nature of the industrial scene has to be constantly kept in mind, and also the fact that attitudes to manual work are also undergoing marked change."

The need for a new type of secondary school which appropriately imparts education in practical subjects and thereby provide suitable education in an age of technology has been thus keenly felt.

The Need for Training of Teachers

In spite of all the felt needs, this reform of introducing practical subjects in our secondary schools has not succeeded because of the lack of supply of qualified trained teachers in these subjects. It is the quality of teachers that in the final analysis makes for the success of an institution imparting education in practical subjects. The nature of practical subjects demands close contact between teacher and taught, and theoretical, practical and skilled competence from the teacher. It is, therefore, necessary to organise a continuous programme of training of teachers of the practical subjects both for the new entrants as well as for the in-service teachers.

Unfortunately training for the teaching of practical subjects has not at all been realised and in the schools where technical subjects like engineering, commerce, agriculture, etc., were introduced, the teachers mostly came from the craft or technical institutions with no experience of teaching and with no pedagogical training. Thus, the training of teachers of practical streams was never contemplated in the proper form in the teachers' training institutions. The result has been that the teaching methods specially required for these subjects have not yet been properly developed.

Present Position

Some of the teacher training institutions did, however, start training of teachers in home science, commerce and agriculture. Out of all the universities having teacher education courses leading to B.Ed./B.T. degree, nearly 25 universities have provisions for Special Methods of teaching in practical subjects such as, home science, commerce or commercial subjects, engineering or technical subjects and agriculture.¹ The subject-wise provision is given in the following table :

TABLE 24

PROVISION FOR TRAINING TEACHERS IN PRACTICAL STREAMS

Method-subjects	No. of universities having provision
Home Science	23
Commerce	22
Agriculture	14
Engineering or Technical subjects	7

However, a careful scrutiny of the syllabuses provided in these papers does not reveal any special method specific to the teaching of the practical subjects, nor did they emphasise the development, the status and objectives of teaching practical streams in the secondary schools. The real attempt, however, for training of teachers in the practical subjects could be considered to have been made with the establishment of the regional colleges of education by the National Council of Educational Research and Training, which is an autonomous body set up by the Union Ministry of Education. The programme of these colleges has grown out of an analysis of the nature and needs of secondary education in India. Among the major objectives of these colleges

1. Statistics based on the information given in *Directory of Post-Graduate Teacher Education Institutions and Courses*. NCERT (Revised Edition), 1966.

mention has been made to prepare teachers of technical subjects, science, industrial crafts, agriculture, home science, commerce and fine arts. In these colleges it is assumed that for the education of the teachers which is broadly based on a foundation of general education, provision should be made for a thorough mastery of subject-matter so as to give him an insight into the discipline of the subject and its up-to-date growth. It also provides for professional preparation consistent with the subject itself. The programme of training in these practical subjects should provide mastery of the basic skills and concepts underlying the subject and to learn the best method of imparting the subject in a classroom situation. Functionally, therefore, general education, content specialisation and professional education of the teachers are integrated to develop competent teachers for practical subjects in these colleges.

However, the multipurpose schools as already pointed out have not been able to make any impact on the problem of diversification of secondary education because the number of such schools in the country is very small and the vocational courses offered are not really terminal in character. Out of about 20,900 secondary schools in the country, about 3,700 are of the multipurpose type. The restricted scope of the multipurpose schools from the point of view of the nature and standard of vocational courses is evident. Out of about 3,700 such schools there are only about 470 schools offering technology as an elective subject. The position with regard to other subjects like commerce, agriculture and home science is none too happy. This is mainly because teachers specifically trained in these subjects were not available who would know the techniques of organising the curricula, imparting instruction in skills, and organising suitable practical experiences based on an understanding of the philosophy underlying the subject and the psychology of learning it.

Training For Teaching Technical Vocational Subjects

In order to meet this situation and supply the need for trained teachers in vocational and technical subjects, the Central Government has given considerable thought to the problem after Independence. The creation of All-India Council for Technical Education in 1945 and the Report of the Scientific Man-Power Committee in 1947 and subsequent high level committees had a far reaching influence on the development of technical training programmes.

Technical Education

It is generally agreed that technical training for industry is concerned with (a) training of semi-skilled and skilled workers, (b) training of technicians, (c) training of professional engineers, and (d) training for research and design engineers. The first two of these categories come within the purview of school education up to the secondary stage. A scheme was formulated in 1958 to start junior technical schools with the specific objective of training educated skilled

workers for industry and in engineering fields. The junior technical school offers a three-year integrated curricula of general education, technical education and technical training in selected engineering trades, running parallel to the normal higher secondary course comprising classes IX, X and XI. In each year of the course, general education, engineering education and workshop training are integrated in such a way that all the three together develop the students as an industrial worker. The junior technical school is more or less a *via media* between a factory training and school education. It observes large number of hours of work per day, roughly 69 per cent more than the normal secondary school. At present about 90 junior technical schools designed to train students in the age-group of 14 to 17 for useful industrial occupations are functioning. Nearly a one-third of these schools function as adjunct to polytechnics. Thus, it will be seen that a variety of attempts are made to introduce technical educational courses for the students of the age-group covered by the secondary stage of education.

The vocational-technical education at this stage of education would be predominantly terminal in nature, qualifying the students for employment. Thus, training of teachers and instructors needed for this purpose will have to be properly trained in the theory and practice of the trades concerned. This would mean that the teachers and instructors will have to be trained for the existing I.T.Is., some technical high schools run in some States, Junior Technical Schools, such other training centres and trade schools in addition to the teachers required for technical, commerce and agriculture streams of the multipurpose schools. This would mean training in (i) designing of courses to give the training programme the broadbased skills as well as general education, (ii) offering courses for training in all the different types of skills and trades in a balanced manner according to the demand, (iii) making the training programme quite practical and realistic and, (iv) arranging a closer cooperation between training programmes and industry. In short these developments in the organisation of technical education highlight the need for the training of teachers specially for the purpose. The curriculum of technical schools and the level at which the subjects should be taught demand that the teachers should not only be qualified in the respective subject fields, but also trained in pedagogy. Further, the teachers should possess a good understanding of the problems of vocational education and they should be equipped with the necessary skills and techniques to deal with these problems at the school stage. Therefore, a new group of teachers who are in a position to teach these practical subjects including engineering, technical drawing and also who can serve as instructors in engineering trades are required to be trained for the proposed requirements.

The teachers required for the polytechnic institutions also must have sufficient technician training themselves and enough industrial

experience and capacity to conduct projects and problem oriented experiences and must be in a position to impart practical experience in the application of the principles and processes studied during the course.

In view of the acute shortage of teachers in the polytechnics, the All-India Council for Technical Education recommended the establishment of four regional centres for training of teachers for polytechnics. These four centres will be located at Bhopal, Chandigarh, Calcutta and Madras. The four institutions are expected to start functioning during 1966-67 with an admission capacity of about 60 each. It is envisaged that these institutions should provide two types of courses, one of 18 months' duration for those having degree in engineering and the other of about 2½ years' duration for those having diploma qualifications. It is further proposed that these institutions may be managed as autonomous organisations under the Societies Registration Act, 1860.

In addition to the provision made under the Teachers Training Programme, it is proposed to encourage the State Governments and other technical institutions to depute their existing teachers to take up advanced and higher courses for improving their qualifications and professional competence.

A programme for training of teachers for engineering colleges initiated in 1959 has also continued in selected university centres and I.I.Ts.

The recent trend of organising summer schools for teachers of engineering colleges and polytechnics by the Association of Principals of Technical Institutions is also worth mentioning. These programmes have been organised since 1964 by the Association in collaboration with the Ministry of Education and the U. S. A. I. D. to provide the teachers of Engineering Colleges and Polytechnics with the opportunity of learning the latest methods and techniques of teaching and to become familiar with recent developments in their respective fields. These Summer Schools achieve a very useful purpose by acquainting teachers with good teaching methods and with the latest developments in the various branches of engineering.

The Polytechnic Summer Schools are organised with the following purposes :

1. to introduce the best teaching methods and techniques for the various disciplines,
2. to improve the subject matter competence of the participating teachers,
3. to improve their skills as teachers and their ability to inspire students,

4. to stimulate the interest of teachers by bringing them in contact with prominent men in their field of teaching,
5. to promote greater understanding and appreciation of each other's training,
6. to relate polytechnic education to the needs of Indian industry,
7. to provide opportunity to selected individuals to acquire the skills and knowledge related to the operation of summer school programmes, and
8. to provide the forum for discussion amongst the participant teachers with similar backgrounds, interests and problems so as to create greater mutual understanding and appreciation and each other's teaching problems.

The programme of summer schools for engineering college teachers generally includes: (1) theories of learning and their applications, (2) techniques in engineering instruction, (3) inter-disciplinary foundation for engineering education, (4) teaching design, (5) the laboratory in engineering teaching, (6) the teaching of the basic manual skills in engineering, (7) the co-relation between education and industrial requirements, (8) the future of engineers and engineering, and (9) a programme of evaluation.

Agriculture

Agriculture has been introduced as one of the crafts at the primary school level and senior basic schools. At the junior basic stage no special teacher of agriculture is provided while at the senior basic stage, one teacher, generally an agriculture graduate, teaches the subject. In addition to these schools, there are certain vocational or agricultural schools at the lower secondary level which impart vocational training with the objective of preparing them as practical agriculturists. Further in several high schools, agriculture is offered as a craft or as one of the electives or as an alternative to some of the subjects under humanities group. Agriculture is also offered as one of the streams in multipurpose high schools. The agriculture stream envisages two types of options : (i) college preparatory which is academic in content and requires chemistry, biology or physics and mathematics, and (ii) employment preparatory which is vocational-bias course requiring practical agriculture, applied mathematics and applied science. Both these groups are expected to take a common basic course in agriculture consisting of : (1) agriculture economics and rural sociology ; (ii) plant science and production ; (iii) animal science and production ; and (iv) agriculture engineering and technology.

It is also proposed to organise agricultural polytechnics on the same lines as technical polytechnics for industry. These are proposed for training of skilled workers and middle level technicians in agriculture, for supporting services needed by the farmer and for trades and industry based on agriculture products. The teacher of agriculture like the teacher of technical schools and polytechnics has, therefore, to be specially trained in the theory and practice of agriculture education. His training should also include acquaintance with the latest techniques of teaching, development of curricula for agriculture as part of general education and as professional discipline, its programmes at the various stages of education, extension activities and other latest developments in the specific branches of agriculture.

Commerce

Commerce is another subject which offers an important aspect of practical education of a terminal nature. The Report of the Rao Committee submitted in 1961 led to the formulation of a two-year National Diploma Course in Commercial Practice and also to a proposed scheme of improving and developing selected commerce schools and opening of Departments of Commerce in polytechnics. Even with regard to multipurpose schools the Commerce stream seems to be quite popular. In Rajasthan nearly 51 schools and in Punjab nearly 32 schools have introduced Commerce as a subject in multipurpose schools.

Thus, from the point of view of the terminal nature of secondary education, the facilities for technical education, agriculture education and commerce education together will provide excellent scope for a large number of students and, therefore, training of teachers specifically for this purpose should be properly organised and adequate facilities need to be provided for new entrants as well as in-service teachers/instructors already working in such institutions for taking up teacher training courses of various kinds.

There is a great dearth of well-qualified and experienced teachers in these subjects because of the disparity in service conditions and pay-scales compared to professional service in industries and firms. Added to this is the lack of sufficient incentive for a continuous professional growth with the result that most of them who take up teaching are afraid of getting fossilized.

All these factors demand various types of well-organised steps for the professional competence of technical-vocational teachers, the chief being, of course, their professional preparation as teachers.

Assumptions Underlying Training Programmes

1. The practical subjects are roughly defined as those subjects which involve some sort of manual dexterity and physical skills re-

quiring practice of theoretical knowledge in workshops and laboratories in addition to the competence in the theoretical contents of the subject area.

2. The distinctive experiences that these subjects demand also require an adequate organising capacity and an understanding of the techniques of handling of raw materials, tools, apparatus and machinery and laying out of workshops and laboratories.

3. The prospective teachers of these subjects should also get a general understanding of the changing world in which the schools function and how these very subjects that they are required to teach have contributed to this change and how this change affects the students that they are expected to teach.

4. Special training programmes should help the teachers to understand the developments which have taken place in Science and Technology in general and in their own subject area in particular and they should also understand thoroughly the influence that this development has on the life of the community.

5. A sort of industrial experience should be planned as a necessary feature of the training programmes by way of in-plant training, guided visits, etc.

6. Since a large number of these teachers often come from industry/firms with no experience of teaching or from universities and technical institutions again with no training in teaching, it is necessary that in addition to the special courses lasting for a full-time training, part-time and sandwich courses and vacation courses should be developed. Attendance in these courses should be made compulsory and it should be laid down as a general rule that no teacher in these subjects would be recognised as 'qualified' teacher in any teaching job unless he has received specialised pedagogical and professional training in teaching of these subjects.

7. In order to keep these teachers up-to-date with modern developments in their subject areas, arrangements should be made for these technical and vocational teachers to take up periodically appointments to posts in industry or commerce or agricultural concerns on a reciprocal basis.

8. Special teaching methods will have to be evolved in keeping with the needs of the subjects and practice teaching in these subjects should be organised on the lines of these new teaching methods.

9. Teachers of these subjects should be trained in psychology of productive work, development of practical curricula with an emphasis on real tasks providing direct experiences in the handling and manipulation of raw materials, tools and machinery.

10. It is also assumed that the training programme for teachers in technical subjects should be so developed as to give them a background of general education, competence in the concerned subject fields, and training in pedagogy and teaching techniques. This programme should also give the teachers a good understanding of the problems of technical vocational education and they should be equipped with the necessary techniques and skills to deal with these problems in their schools.

11. With this assumption in view, special training institutions on the lines of the Regional Colleges of Education should be started with the four-year integrated curricula comprising specialisation in subject fields and pedagogical training for preparing the teachers in these technical and vocational subjects.

12. Till such institutions are started, technical and vocational polytechnics may recruit fresh technical or science graduates and diploma holders in engineering, and train them for a year or two to meet the urgent needs of the subjects involved.

13. The teaching of these subjects also envisage the posts of instructors in subjects like workshop training, engineering drawing, engineering trades, agricultural operations and commercial practices. Till such time that special training schemes are developed on the lines of Craftsmen-cum-Instructors Training Centres set up by the Directorate General of Employment and Training, Ministry of Labour for training correct type of instructors in these practical streams, it is necessary to organise some interim training programmes for craftsmen and skilled workers.

14. The success of such training programme will also depend upon the training of teachers in guidance and counselling.

Contents of Training Programme

Broadly speaking the training programme for the practical teachers would include theoretical teaching for developing proficiency in the subject matter, methods and procedures in teaching, an amount of student teaching for practical classroom experiences, theory of education involving philosophical, psychological and sociological foundations, development and use of instructional and audio-visual materials, techniques of evaluation and general acquaintance with the programme of guidance and counselling.

In developing the teaching methods and procedures in these practical subjects, special attention may be paid to class organisation and workshop management, planning and equipping the workshops and laboratories, maintenance of discipline and proper spirit in the workshops and laboratories, safety measures and accident preventions, maintenance of job sheets and records of students projects and develop-

ing special evaluative techniques. These aspects of teaching methods are typical of these practical subjects and hence, should find a central place in the professional training programmes for these teachers.

The main concern of the training programme should be to encourage teachers in service and those who are in preparation for teaching to recognize and analyse the many problems and challenges that confront these teachers. Most of these problems and challenges are quite different in nature and scope than those in the teaching of subjects coming under the Humanities group. The teachers of these practical subjects have to constantly analyse and plan their courses (theory as well as practice) and devise various new techniques of presenting teaching material and planning detailed instructions. In fact, these factors will become the basis of lesson planning for successful class teaching. Some typical lesson plans in practical subjects like Commerce and Wood-work as given at the Regional College of Education, Ajmer are appended herewith to show how teaching of topics in the practical subjects could be properly organised.¹

In view of the magnitude of the problem it is suggested that a large number of evening and correspondence courses for training of practical subjects may be introduced in teacher-training institutions and engineering/agriculture/commerce/home science colleges so that those who are already employed as teachers/workers in factories are benefited without having to cease work.

R. P. Singh

Teachers of primary classes attached to high schools/higher secondary schools have special training facilities in a number of states, in India. These teachers are distinguishable from their counterparts, who teach primarily in separate elementary/primary schools. Not only their nomenclature but also their duration of study varies. No separate data of the percentage of such teachers are available but one can safely assume it to be considerable. Out of the total number of these teachers, a substantial number remains as yet untrained. The percentage of such teachers may be as high as 40 per cent.¹ The trends of according greater respect, giving higher salaries and preparing the elementary teachers thoroughly for the job are, however, too significant to go unnoticed. For instance, Dr. K. L. Shrimali in one of his speeches as Minister of Education had stated, "The effectiveness of a training programme for primary teacher depends mainly on three factors. The first is the mental equipment which the teacher brings with himself to the training institution—his general education, temperament and character. The second is the efficiency of the training programme itself which, in its turn, depends upon the quality of the teacher educators, the syllabus of training and the physical equipment provided for training institutions; and the third is the conditions under which teachers will be required to work in primary schools after training is over."² In the same speech, he spoke on the state of affairs obtaining in the teacher training institutions in India, particularly the ones that cater for elementary teachers. "I know that there are several good training institutions and some of them would redound to the credit of any country. But, I am afraid that my experience of the general run of the training institutions for Primary teachers is not happy."³ On this point perhaps others from amongst the audience shared his view equally.

Facilities Where They Exist. There are number of universities in Gujarat, Madhya Pradesh and Maharashtra which offer courses for undergraduates and higher-secondary pass candidates who will be teaching in primary/elementary classes, attached to high schools/higher secondary schools. Besides these universities, the State Department of Education of Maharashtra runs a course for

1. *Education Commission's Report*. P. 79.

2. *The Education of the Primary Teachers in India*. Ministry of Education, 1961. P. 22.

3. *Ibid*. P. 25.

these teachers. In Gujarat universities like Baroda University, Gujarat University and Sardar Patel University have this course. In Madhya Pradesh Saugar, Jabalpur and Ravishanker Universities are doing this work.¹ In Maharashtra besides the State Department of Education, Nagpur and Shivaji universities are training such teachers. Bombay and Poona universities and a few other educational institutions are also performing the same task. Where university departments of education are offering these facilities, some colleges affiliated to these universities are also sharing this responsibility. For instance, in Bombay Sadhana School of Educational Research and Training is working under the jurisdiction of Bombay University. In Khandwa, Madhya Pradesh, the same is being done in a private-aided college.

Nomenclature and Duration

The nomenclature and duration of the course varies from State to State, as already noted. In Gujarat it is called Teachers' Diploma in Teaching, in Maharashtra the name is Diploma in Education and in Madhya Pradesh, Jabalpur and Khandwa it is called Diploma in Teaching and at Ravi Shanker University the name given to it is Diploma in Education. In Bombay also their diploma is known as Diploma in Education. Except for Madhya Pradesh where the duration is of 2 years, in other places the period of the course is 2 terms which means one academic session.

Requirements For Admission

The requirements of admission vary considerably from State to State. Of course, within the state variations are very minor. In Sadhana School of Bombay the prospectus lays down that "No candidate shall be admitted to the examination for the Diploma in Teaching unless he has passed—

- (a) The S. S. C. Examination or an examination recognised as equivalent thereto, and subsequently has obtained teaching experience for a period of not less than three years in a School recognised by this (Bombay) University.

Or

- (b) the First year Examination in Arts, Science or Commerce of this University or the Intermediate Examination in Arts, Science or Commerce of any other university or examining Body recognised by this university.

Or

- (c) The S. S. C. Examination or an Examination recognised as equivalent thereto and subsequently has obtained the diploma in training of teachers for practical subjects in multipurpose schools.

1. In M. P., Diploma in Teaching came into being in the year 1935 after T.T.C. was abolished.

Provided, however, that in order to be eligible to offer special method in commercial subjects under Paper II at the examination a candidate shall have passed—

- (i) the S. S. C. Examination in the Commercial subjects and subsequently obtained teaching experience for a period of not less than three years in a school recognised by this university.

Or

- (ii) the First Year Examination in Commerce of this University, or the Intermediate Examination in Commerce of any other University or examination body recognised by this university. Provided, further, in order to be eligible to offer special Method in Industrial Education under Paper II at the examination a candidate shall have obtained a diploma in a branch of Engineering or Technology.”¹

The prospectus of Bombay University itself has one more paragraph added to the above requirements which states :

Provided further that in order to be eligible to offer Special Method in Industrial Education under Paper II at the examination a candidate shall have obtained a diploma in a branch of Engineering or Technology.²

Sardar Patel University, Vallabh Nagar, Pamphlet No. Ed. 1 for Diploma in Teaching and Diploma in Teaching (English) simply states :³

No candidate shall be admitted to the examination for Diploma in Teaching unless he has—

- (1) passed the S. S. C. Examination of the Gujarat S. S. C. Examination Board or an Examination recognised as equivalent thereto with teaching experience for a period of not less than one year in recognised schools. The University will, however, be competent to waive the requirement of experience range to 100 days in case of women candidates ;

Or

- (1) passed the preparatory examination of this University or an examination recognised as equivalent thereto, and

1. Sadhna School of Education Research and Training, Bombay. *Handbook* 1966-67. Pp. 1-2.

2. University of Bombay. *Diploma in Education Prospectus*. P. 2.

3. No. 93, June, 1966.

- (2) attained the age of 17 years plus on the date of opening of the new session of the colleges.

University of Saugar, Madhya Pradesh, lays down: "Every candidate for admission to the examination for Diploma in Teaching shall :

- (a) have passed Higher Secondary Certificate Examination of the Board of Secondary Education, Madhya Pradesh, or an examination recognised as equivalent to it, or the Intermediate examination of the Board of Secondary Education, M. P.
- (b) have prosecuted a regular course of study at a college recognised by any University of the Madhya Pradesh for not less than two academic years after having passed the examination qualifying for admission to Diploma in Teaching Examination."

The difference in the requirements ranges from one year to three years of teaching experience before a candidate is allowed to join this course. Whereas in Nagpur candidates for Diploma in Education may not necessarily have any teaching experience (the rules speak of preference being given to experienced persons), the rest make it obligatory for the candidate to have some experience. But more or less the qualifications range between a higher secondary examination pass to pre-university Examination pass with any subject combinations.

The Syllabi

The syllabus of Diploma in Teaching/Diploma in Education consists of mostly three parts: (1) theoretical work, (2) practical teaching, and (3) the social work or community service. It would perhaps be worthwhile to see what papers are taught in these courses and the practical work expected to be covered during the two terms or sometimes, as in the case of Madhya Pradesh, two years.

In Maharashtra, as pointed out earlier, universities offer course Diploma in Education. For instance, Bombay University Prospectus demands that each candidate must have read four papers and done some practical work before he can take the Diploma in Teaching examination. Regulation 60 says simply that the examination shall consist of—

"Part I—Written examination—Four Papers—80 Marks each.
and

Assessment of the year's work in each paper by the Co-ordinating Committee—20 marks each.

Part II—Assessment of Practical work by the College by grades."¹

1. University of Bombay. Prospectus. Pp. 3-4.

In the latter part of the prospectus the papers and their detailed outlines are given. The papers are :

- (1) Elementary Principles of Education and Psychology.
- (2) Special Methods—English, Modern Indian Languages, History, Geography, Mathematics, Science, Industrial Education, Craft, Agriculture, Home Science, Indian Administration and Civics.
- (3) General Methods, School Hygiene and School Administration.
- (4) An Outline of 20th Century developments in Indian Education and Educational Administration in the State of Bombay (now Maharashtra).

Baroda University has divided its syllabus into two parts, viz. (a) Theory, and (b) Practicals. Both of these have been further subdivided into (i) internal, and (ii) external for the purpose of examination. Part I consists of four papers :

Paper I— Principles of Education and Teaching and Elementary Educational Psychology.

Paper II— Class Organisation, Health Education and Educational Administration.

Paper III— Basic Education and Elements of Special Fields.

Paper IV— Special Methods of Teaching.

Methods in any *two* of the following :

- (1) Gujarati
- (2) Hindi
- (3) Social Studies
- (4) Mathematics
- (5) General Science
- (6) Craft
- (7) Drawing.

Part II consists of Practice of Teaching.

It is, however, significant that the above course does not include English as a subject of study either for teaching or practice. The

reason for this lies in the fact that English is not a subject for study in middle school curriculum of Gujarat.

Perhaps another explanation is needed for T. D. (non-English) as a part. This part is contained in other syllabi as well but under different heads. At any rate, the details of it will not be out of place here—

1. (i) Importance of the audio-visual aids in Education.
- (ii) The proper use of the following materials :
 - (a) Graphic materials such as Bulletin Boards, Charts, Posters and Models.
 - (b) Auditory aids—Radio, Gramophone, Tape-Recorder, Microphone, Movie Picture, etc.
2. (i) Aims and objectives of physical and health education.
- (ii) Principles of organising and conducting games and sports.
3. (i) General aims of school library.
- (ii) The knowledge of the following :—
 - (a) Process of purchasing of the books.
 - (b) Classification and cataloguing of books.

Although no detailed commenting on the above part of the Paper III is necessary, the objectives behind keeping these elements in the paper are quite evident. Teachers of these elementary classes are junior members of the staff and therefore they have to assist in organising sports, games and library and give technical assistance and operate the audio-visual aids. These additional skills make these teachers valuable assets to the institutions where they work.

A two-year programme as followed in Madhya Pradesh should be interesting to peruse. For instance, the University of Saugar lays down that the syllabus of Diploma in Teaching shall have two parts. Part I, having six papers and Part II will constitute (a) Craft and Community Work and (b) Practice Teaching.

The papers are :—

Paper I—Principles and Practice of Education.

Paper II—Educational Psychology.

Paper III—School Organisation and Health Education.

Paper IV—Hindi or Mother Tongue and its Methodology.

Paper V—Social Studies and its Methodology or Mathematics and General Science and their Methodology.

Paper VI—English or Sanskrit and its Methodology.

Women Trainees

Reference need to be made to the recommendations made by the National Seminar, referred to earlier, particularly because they pertain to certain absolute necessities which are not commonly available in the case of women trainees.

These recommendations stated :¹

- (a) Qualifications, etc., as regards recruitment and training for women teachers should be lowered ; but in no case, lower than Middle class pass or its equivalent.
- (b) All girls' schools should be staffed by women teachers.
- (c) The upper age limit of recruitment for women candidates should be raised.
- (d) Women should be encouraged to go through condensed courses and be trained for the profession.
- (e) More facilities for training should be given to women teachers by opening additional training institutions, wherever necessary.
- (f) All women teachers under training should get their salaries and other allowances, while under training. Fresh candidates should get suitable stipends, even when they are admitted to private and aided institutions.
- (g) Quarters for women teachers should be provided for the primary school teachers and this programme should be given a high priority.
- (h) Special pay for working in rural and backward areas may be given.
- (i) Women teachers may be given extensions or given re-employment.

1. *Op. cit.* P. 37.

- (j) The upper age-limit for recruitment of women as teachers may also be relaxed.
- (k) Part-time teachers should be appointed.
- (l) Husband and wife should be recruited, if available, and posted in the same place.

These recommendations pertain to facilities that did not exist in the country until recently. Women teachers, in order to be given incentives to continue on their jobs, must not only be provided training facilities but their service conditions must also be improved. Compared to other countries the task ahead is very great and the existing conditions very poor. It may also be added that the poverty of condition does not relate to women only but because of historical-social traditions they are more handicapped than the men-folk.

The S.T.C. of Maharashtra

The Secondary Teachers Certificate of Maharashtra run by its development of education is a legacy of Bombay State where this was started to supplement the course already being offered by the university. Its distinctive feature is its *in-service character*. Whereas all other similar courses in Karnatak, Bombay, Gujarat and Madhya Pradesh are for regural students—mostly experienced, the S. T. C. is mainly for teachers who are already in service. But they have no teaching qualifications. The rules of the department are very clear in stating the objectives of the courses. They say that the S. T.C. is meant to encourage teachers and specially under-graduate teachers who cannot take any degree or diploma course of the universities in teaching in secondary schools to improve their professional qualifications, (therefore), the Education Department of the Government of Maharashtra will hold once a year one examination of the Secondary Teachers' Certificate.

Qualifications for admission. The rules state : "The examination will be open to candidates who have passed the S. S. C. examination, Lokshala Examination or any other examination accepted by the Department as equivalent to or higher than S. S. C. examination including Shastri Examinations provided :

- (a) they have completed the age of 17 years on or before applying for the examination in part I ;
- (b) they have worked for a total period of not less than 9 months excluding vacations, before the date of Examination, in a secondary school (or schools) recognised by the Department or in standards V to VIII of a primary school ;

Or

- (c) they have worked for a total period of not less than 18 months excluding vacations, before the date of Examination as part-time teachers, teaching for not less than 10 hours per week in a secondary school (or schools) recognised by the Department or as teachers in a night school (or schools) recognised by the Department ;

Or

- (d) they have undergone a regular course of instruction at a training institution or class recognised by the Department for the purpose and attended at least $2/3$ rd, of the total attendance at lectures, etc. within a minimum of 35 days in each term or alternatively if so allowed, has carried out the course of instruction under a teacher recognised for the purpose.

No private candidates who have not attended a full years' training course in a recognised training institution or class or under a teacher recognised for the purpose, will be eligible to appear for the S. T. C. Examination."¹

Like any other State department rules and regulations, the above are also comprehensive enough to lay down the minimum hours per week of work and even the private candidates have not been left out.

The Syllabus. The syllabus of the S. T. C. also has two parts like all other similar courses, viz., theoretical and practical. The rules of the Department of Education mention :

"The Examination shall consist of two parts :

Part I—Theoretical (written) which shall consist of the following four papers each carrying 100 marks :

- (i) Elementary Principles of Education and Educational Psychology ;
- (ii) (a) Educational Administration and Educational Movements,
- (b) School Organisation and Hygiene ;
- (iii) General Methods ;

1. *Rules for the Secondary Teacher's Certificate Examination.* Maharashtra State. Pp. 1-2.

(iv) Special Methods (candidates to select any two subjects from among the following) :—

Regional Languages—Marathi and Gujarati, Hindi, Urdu, English, Kannada.

A classical language or a modern European language such as Sanskrit, Persian, French, etc.

History, Geography, Mathematics, Science (including nature study), Craft.¹

In the B part, the rules lay down that although each candidate shall, at the final examination, prepare two notes of lesson but only one will be seen and unless very necessary the assessment will be done on the basis of the first lesson alone. The examiners will be an Assistant Inspecting Officer and the Head Master or teacher of the school or the Training Institute where the candidate has completed the course. The distribution of marks shall be as follows :—

- (a) 200 marks for a lesson or lessons at the examination and for the two lesson notes prepared.
- (b) 100 marks for the year's work, *i.e.*, lessons, observations and essays to be assessed by the Head of the Institution or the teacher recognised for the purpose.

CONCLUDING REMARKS

The problems of undergraduate teachers who teach in classes attached to high schools/higher secondary schools are quite different from those where teachers teach in separate elementary schools. In separate elementary schools teachers have usually the minimum qualification prescribed. They get less incentives to improve their lot. Good teachers are rare to find in such schools. Shortage of teachers of Science and English is more marked here than elsewhere. The undergraduate teachers of elementary classes of high schools/higher secondary schools are generally assigned classes that are beyond their prescribed qualifications. This is a challenging opportunity. This can also lead to unfortunate results such as neglect of adequate teaching and ill-equipped schools. But this situation obtains in States like Bengal and Jammu and Kashmir where teachers qualified to teach up to class VI are actually teaching up to class VIII. This is the direct result of the shortage of properly qualified teachers.

Shortage of Science and English teachers is also marked. This shortage is shared by high schools and even colleges also. Those who have paper qualifications seldom measure up to the expectations.

In certain states such as Bihar, classes I—VIII are housed in separate buildings and have exclusively undergraduate teachers

1. Rules for the S.T.C. Examination. *Op. cit.* P. 3.

teaching in them. Otherwise, generally States have separate elementary schools and also elementary classes attached to them. Where elementary classes are a part of high schools/higher secondary schools trained graduates also teach alongside undergraduates (trained and untrained).

At any rate, this country is faced with the gigantic task of providing sufficiently qualified teachers at the elementary stage whose mental equipment is not incomparable with their counterparts elsewhere. Their service conditions have to be improved appreciably so that they do not suffer from complexes. A little bit of streamlining has also to be done in order to remove the handicaps of great variations as they exist today. True, the financial position of the country is frustrating the achievement of goals already set. But cutting down the roots of a system by unimaginative handling is also not very wise. The standard of education cannot be raised without providing adequate resources to meet the situation—both men and material. The common complaint that the teacher-trainees are generally below the average needs also a closer scrutiny and the obstacles in the way removed. Some kind of provision has to be made under which methods are taught alongside the content. That the future is not permitted to remain very dark for teachers at this stage holds out the key to ultimate success.

INTRODUCTION

The post-independence era has witnessed rapid strides of development in social, economic and cultural spheres in India. These developments have entailed rapid development in the field of education also. During the last twenty years, there has been a phenomenal expansion in the field of education at all levels. Along with the expansion of education, consistent efforts have been made in the field of educational reconstruction. Two successive education commissions appointed in the wake of independence made recommendations which had far-reaching impact on the development of education in independent India. The establishment of higher secondary schools, the introduction of diversified programmes of instruction, the programme of guidance and counselling are no doubt innovations of importance in the educational system of the country. Yet, if there is one single innovation which has made its impact felt on Indian education more than others, is the programme of in-service education. It was launched on a systematic basis in the year 1955. The in-service education programme will remain a bold step in the right direction to improve the quality of education. Its importance has been recognised by one and all and its potential to contribute effectively towards educational reconstruction has been acknowledged beyond doubt by administrators and educationists alike.

What is In-Service Education

There are two aspects of teacher preparation. The individual before he joins the school is exposed to a programme of experiences and knowledge about the theory and practice of teaching, normally in a teacher training college. Such a programme leads to a degree, diploma or a certificate. This is the pre-service education of a teacher. Again a teacher in the class-room or an administrator at his job is also brought into a programme and exposed to such experiences as aim at contributing to his professional and personal growth. Such a programme is a programme of in-service education.

In-service education is thus a programme of activities aiming at the continuing growth of teachers and educational personnel in service. It may be regarded as the sponsoring and pursuing of activities which will bring new insight, growth, understandings and cooperative practices to the members of the teaching profession and arouse them to action to improve themselves in every possible manner. In

other words, it may be regarded as including all activities and experiences participated in by the educational personnel in education during their service. These activities are planned and organised by various agencies to help the educators to improve as persons and to mature as professionals.

In-service education, whether individual or group initiated, is a process of working towards change. If we view it in terms of human behaviour, the changes are ordinarily identified as gain in new knowledge, increase in understandings, acquisition of desirable attitudes and development of new interests. Viewed in terms of material, media and knowledge, the changes may suggest exploration, modification and evaluation. All these processes also imply personal involvement and contributes to desirable changes in behaviour and teaching practices.

Major Assumptions

The following are some the major assumptions on which in-service education is based :

1. It is impossible to conceive of pupil growth without teacher growth. The teaching profession cannot become or remain vital, dynamic adjusting entity without the people involved continually expanding both their understanding and their effectiveness.
2. The maximum pupil growth is correlated with effective teacher growth.
3. All attempts to improve education through the provision of better facilities, better programmes and better teaching aids can prove effective only if the teacher is kept professionally alert and academically sound.
4. Pre-service programme does not and cannot fully prepare a person to function adequately as a teacher.
5. It is always possible for a practising teacher to become a better teacher.

Why In-Service Education ?

The need for in-service education for teachers is based mainly on the need to reconstruct education. It is supported by the conviction that the teacher is the pivot and the key-point in the process of educational reconstruction.

In the past, it was believed that once the teacher goes through the training programme, he develops all the necessary skills and competencies for teaching. This no longer holds true. New developments in pedagogy, new curricula and developments in educational technology, new changes in the school structure, acceptance of the need for providing for individual differences make it imperative to re-orient the teachers already trained. In-service education appears to be the only answer to this problem.

It is now accepted that pre-service education does not and cannot fully prepare a person to function effectively as a teacher and that it is always necessary and possible for a practising teacher to become a better teacher.

Education is an integral force in our social order. Since society is changing, new problems constantly appear. A dynamic school programme is needed to keep the children abreast of the time. This places on the teacher the responsibility to become conversant with social and economic problems and plans for changes. Only effective in-service programme can help the teachers to equip themselves to shoulder these responsibilities.

In a country where education is expanding at a rapid rate, a shortage of adequately prepared teachers is bound to be felt for a number of years. It will not be possible for hundreds of teachers to enter the training colleges before entering the schools. The programme of in-service education is required to prepare as a temporary measure the individuals practising as teachers without necessary preparation.

Education is going through a revolutionary period. Research and experimentation are moving along on all dimensions of the educational process. A massive revision of curricula in social sciences, mathematics and natural sciences is changing not only the methods of teaching but also the very conception of content and the perspective towards what is important in it. These changes are profound enough to cause a serious gap between what teachers are doing and what we expect them to do. This necessitates a retraining of teachers not as a temporary phenomenon, but as a continuous one. If the new science of today is to become the old science some years from now as Oppenheimer has suggested, a continued in-service training of teachers will be necessary to keep instruction up-to-date.

Teacher education in an age of rapid changes will have to take a double function, *viz.*, implementing changes, generated through research and experimentation and of being an active agent of change in several schools. The programme of in-service education will be required not only for teachers who entered the profession some years ago, but also for teachers who are coming out from teachers' colleges mainly because teachers' colleges are slow to respond to changes. Any

degree of pre-service training cannot anticipate the new problems. It is, therefore, necessary that the result of new researches and experimentation should be brought to the help of the teacher through a programme of in-service education.

Lastly, in-service education programmes will be helpful in giving a field test to the findings of experimentation and research and thus prepare fresh ground for further development.

Historical Background

A peep into the history of education in India reveals that no thinking was given to the problem of in-service education of teachers during the 19th century. The reports of various commissions deal mainly with the question of teacher preparation at the pre-service level. The famous Wood's Despatch states :

Our present aim should be to improve the teachers whom we find in possession...They should be encouraged to attend the normal schools and classes which may hereafter be instituted for this class of teachers...We desire to see the establishment with as little delay as possible of training schools and classes for masters in each presidency of India.¹

After the publication of the Wood's Despatch, a few normal schools were set up for preparing teachers at the elementary level. The first professional college to prepare teachers at the secondary level was opened in Madras in 1856. Incidentally this was the only college for the next 50 years to follow.

The Indian Education Commission of 1882-83 made the following two recommendations :

1. that an examination in the principles and practice of teaching be instituted, success in which should thereafter be a condition of permanent employment as a teacher in any secondary school, Government or aided ; and
2. that graduates willing to attend a course of instruction in a normal school in the principles and practice of teaching be required to undergo a shorter course of training than others.²

It will be seen that in the two important documents quoted above, the authorities were concerned about the quality of teachers who as a rule entered the schools without any training. Provision for pre-service training appears to be the keynote of the recommendations made by these two august bodies.

1. *Wood's Despatch*. Para 67.

2. *Report of the Indian Education Commission, 1882-83*. P. 259.

In a country where the professional preparation of teachers started more or less during the 20th century, one could not expect a special consideration of a thinking in the field of in-service education earlier. In the beginning of the 20th century, four more training colleges at the secondary level were established, viz., S.T. College, Bombay (1906), David Hare Training College, Calcutta (1908), Patna Training College (1908) and the Spence Training College, Jabalpur (1911).

The need for the second type of teacher preparation, namely, the in-service education of teachers, was stressed by the two government resolutions : one in 1904 and the other in 1913. The first resolution considered it necessary for a training college to maintain a close relation with the school, so that the student on leaving the college and entering upon his career as a teacher may not neglect to practise the methods which he was taught. It further suggested that the old students of a training college should be occasionally brought together again and that the inspecting staff should co-operate with the college authorities in seeing that the influence of the college makes itself felt in the schools.

Nine years later, the Government of India passed another resolution which stated :

The trained students whom the college has sent out should be occasionally brought together again and the inspecting staff should co-operate with the training college authority in seeing that influence of the college makes itself felt in the schools.... As teachers left to themselves are liable to deteriorate, there are great advantages in periodical repetition and improved courses during school vacation.¹

Again in the year 1929, the Hartog Committee in its recommendations clearly came out with the need for in-service preparation of teachers. *Inter-alia*, this Committee recommended :

Even under ideal conditions where the right type of teachers have been selected and well trained, the teacher is much isolated and must often be in need of guidance and encouragement. Journals, refresher courses, conferences and meetings can do much to brighten the lives of the teachers and improve their work.²

After the recommendations of the Hartog Committee, one finds some sporadic attempts at in-service training here and there. The U. P. Government started a scheme of refresher courses for school teachers and several courses were given at different universities by

1. Government of India. *Educational Policy*, 1913. Para. 57.

2. *Hartog Committee's Report*. Pp. 81-82.

university professors. However, due to financial difficulties this scheme was discontinued. Madras Government introduced the practice of vacation courses, but they were also discontinued. No systematic efforts appear to have been made either by the Government of India or by the universities or training colleges to organise a planned programme of in-service education in the country.

In the year 1937, the Wood-Abbott Report on Vocational Education clearly referred to the new concept of two-fold nature of training of teachers, namely, pre-service training as well as in-service training. This Report stated :

We are of the opinion that the training of teachers should consist of two distinct parts. First, a pre-employment training of students in normal schools and later refresher courses for practising teachers....The second part of training has not developed in India to the extent which conditions of the life and the service, particularly of rural teachers, demand....If the spirit of those who have had something before entering upon their work is to be kept alive and if their technical skill as teachers is to be improved, it is vital that they should have opportunities from time to time to attend refresher courses. The time may not yet be ripe for the logical outcome of this concept of the two-fold nature of the training of teachers. But in course of time, there ought to be in each province a Government Training College comfortably housed, well-equipped and organised and staffed for the purpose of providing a sequence of refresher courses of one or two months duration throughout the years.¹

The climate for in-service training of teachers gradually gathered momentum in India after 1937. This is evident from the reports of several commissions and resolutions by professional organisations of teacher-educators on the problem.

In 1944 the Sargent Report on "Post-war Educational Development in India", while discussing the need for an improved organisation of teacher preparation, suggested :

In addition to the provision for the actual training of teachers, refresher courses in accordance with the recommendations of the Board should be provided at frequent intervals in order to keep trained teachers up-to-date. Such courses should cover all the subjects of the curriculum as well as new ideas and methods of general interest. They are of the greatest importance in a country where a large number of teachers necessarily serve in isolated villages.²

1. *Abbott-Wood Report*. Pp. 24-27.

2. *The Sargent Report*. P. 64.

During the several years after 1944 one finds different States taking up the programme of refresher courses in the country. Madras had already started a programme of refresher courses for the teachers of English from 1933. YWCA had already started organising refresher courses for teachers every year at Ootacamund. In Madras city during the forties, short courses and evening classes were arranged from time to time. Some of these courses were held with an admission fee of Re. 1 for the whole course. The first course of this type was organised by Christian Literature Society and two more were organised under the auspices of South Indian Teachers' Union and Madras Teachers' Guild. A course was organised by Madras city teachers at St. Christopher Training College. Dr. Allagappa Chettiar Training College, Karaikudi, started the practice of extension lectures about this time. In U. P. a refresher course in General Science was held. In Bihar, the technique of organising refresher courses was improved. Elaborate syllabi were prepared and sent to teachers in advance, the idea was that those who came to refresher courses should have put in some work on the syllabus beforehand. The attempt, however, was not very successful. During the year 1950, the University of Mysore, organised a summer course in education for college lecturers. This was organised by the Teachers' College, Mysore. This appears to be the first attempt to provide in-service education to lecturers of colleges.

In Bombay, the Association of the Headmasters of the Bombay State with the cooperation of the Education Department organised a refresher course at Mahabaleshwar. A three-week in-service course was also organised at Jullundur.

This was the position of uncoordinated and sporadic attempts made by different institutions, namely, teachers, colleges, universities, public organisations like the Y.M.C.A. or professional associations like the South Indian Teachers' Union, Madras Teachers' Guild or the Bombay State Headmasters' Association. Though sporadic in nature, such attempts were the pioneering work which stimulated a good climate for putting the programme of in-service preparation of teachers on an organized basis for the future.

In the year 1949, the University Education Commission under the Chairmanship of Dr. S. Radhakrishnan on the basis of first hand visits to a number of teachers colleges and after meeting a number of teacher educationists, recommended :

An urgent reform is the institution of vacation refresher courses for High School and Inter College teachers. At present neither students nor teachers utilise their vacation. For most of them vacation is the period of want of occupation. Most of our teachers do not keep intellectually alive, and there is little inducement for them to do so. It is extraordinary that our school

teachers learn all of whatever subject they teach before reaching the age of 24 or 25 and then all their further education is left to experience which is another name for stagnation. We must realise that experiment before reaching its fullness and the teachers to keep alive and fresh become a learner from time to time. Constant out-pouring needs constant undertaking ; practice must be reinforced by theory and old must be constantly tested by the new.¹

The Commission also recommended that the scheme of refresher courses could be made a real success if the authorities of schools and colleges and the Government Education Departments made certified attendance at a university refresher course once every four or five years, a qualification for promotion.

In the year 1950, the First Conference of the Principals of Training Colleges met at Baroda. A special committee of the conference on the organisation and administration of in-service teacher education recommended, "To ensure the continued professional growth of trained teachers and to prevent their lapse into unprogressive methods," refresher course both general and special should be organised. The committee recommended shorter course for untrained teachers working in class, refresher course for trained teachers and special courses for those teachers who wanted to have any advanced training in a specific field.

In the year 1951, one more medium of in-service preparation of teachers was suggested. The Joint Secretary of the Association of Training Colleges drew the attention of the conference to the suggestion regarding the institution of professional training through correspondence courses spread over a couple of years with a break but intensive training at the end. The problem was again discussed in two successive conferences. Then came the recommendation of the Secondary Education Commission in the year 1953. The Commission observed :

However excellent the programme of teacher training may be, it does not itself produce an excellent teacher... increased efficiency will come through experience, practically analysed and through new and group efforts at improvement. The Teacher Training Institution should accept its responsibility for assisting the in-service stage of teacher training. Among the activities which the Training College should provide or in which it should collaborate are :

- (i) Refresher courses,
- (ii) Thorough Intensive courses in special subjects,
- (iii) Practical training in workshop,
- (iv) Seminars and professional conferences.

1. *University Education Commission's Report, 1948-49.* P. 95.

It should also allow its staff to serve as consultants to a school or group of schools conducting some programme of improvement.¹

The Third Conference of the Principals of Training Colleges in India held in 1954 further discussed the programme of in-service education of secondary school teachers.

The cumulative effect of the series of recommendations by various commissions and committees and the efforts of the Indian Association of Teacher-Educators resulted in the establishment of the All-India Council for Secondary Education in the year 1955. It decided to organise a well-planned and well-organised programme of in-service education of secondary school teachers through the establishment of Extension Service Centres in selected training colleges in the country. This decision is the most significant step taken in the direction of improvement of education in general and secondary education in particular. As is natural for a developing country, the in-service education programme did not start from the bottom, but the decision was taken at the top. The programme of in-service education and its organisation was designed to trickle gradually to the lowest level in future. A central body in the form of All-India Council for Secondary Education was entrusted with the work of giving guidance and assistance, financial as well as academic, to put this programme on a sound base at the initial stage.

Growth of In-Service Education

The formal organisation of the programme of in-service education through teacher training institutions is a revolutionary innovation in the field of education in general and teacher education in particular. When we look back to all the recommendations made by various committees, commissions and organisations we see that there has been a time lag of more than 40 years between the origin of the idea of in-service education and the actual implementation of the same. Forty years is no doubt a long span of period, but if one considers that the country was ruled by foreign rulers up to 1947 and when one also considers that the British rulers were not interested specially in providing good education, it appears that this innovation of in-service education could not be said to have taken a long time for implementation. This is further supported by the fact that Teacher Education by itself did not develop considerably during this period. Up to 1908, there were only eight colleges of teacher education in India and the number went to thirty-seven by 1945. While in forty years, there was an increase of only thirty-four training colleges in India between 1945 and 1966 the number has increased from thirty-seven to two hundred and seventy-five approximately.

There are special reasons accounting for the rather prompt implementation of the programme of in-service education in India. The

1. *Secondary Education Commission's Report*. P. 178.

major reason was the anxiety on the part of an independent country to expand the base of education on the one hand and to provide quality education on the other. After independence, the Government of India took early steps to improve the quality of teachers. As we have seen, actually between 1947 and 1954, two commissions were appointed and many of their recommendations were implemented. This was a major factor which facilitated the spread of in-service training programmes in the country.

The second factor was the acceptance of the idea that extension activities were as much useful in education as they were in other fields like agriculture. Agricultural Extension had already proved useful and effective in U. S. A. where its foundation was laid as far back as 1862 when the U. S. Congress passed the Morrill Act. Extension activities in the field of agriculture were put on a firm base in U. S. A. in the year 1914 when the Smith-Lever Act was passed. The success of the experiment of extension services in the field of agriculture in the U. S. A. stimulated the Government of India to start large scale-programmes for extension education in the field of agriculture in the year 1952.

The following table shows the growth of teacher colleges in the country from the dawn of twentieth century.

TABLE 25
GROWTH OF TEACHER COLLEGES AND THE PROGRAMME OF
IN SERVICE EDUCATION

States	Up to 1902	1903- 20	1921- 35	1936- 45	1946- 50	1951- 55	1956- 60	1961- 62	Total	1965- 66
Andhra	1	...	1	...	2	3	1	...	8	9
Assam	...	...	...	1	1	...	3	...	5	7
Bihar	...	1	...	...	1	4	...	1	7	7
Gujarat	...	...	1	...	2	2	2	4	11	17
Jammu and Kashmir	...	...	...	...	1	2	...	...	3	3
Kerala	...	1	...	1	...	2	16	1	21	22
Madhya Pradesh	1	...	1	...	2	2	4	2	12	15
Madras	1	...	2	1	3	6	4	2	19	19
Maharashtra	...	1	1	2	2	6	5	3	20	27
Mysore	...	...	1	2	2	3	3	1	12	20
Orissa	...	...	1	...	...	1	...	1	3	4
Punjab	...	...	...	2	2	8	9	...	21	25
Rajasthan	...	...	...	1	1	1	2	1	6	11
U. P.	...	2	2	2	15	8	16	3	48	56
West Bengal	...	1	2	2	2	2	5	3	17	26
Union Territories	...	...	1	1	1	1	2	...	6	7
Total	3	6	13	15	37	51	72	22	219	275

It will be seen from the above table that teacher education had a very rapid development after the dawn of Independence in India. The number of training colleges by the end of 1945 was only 37, but in 1966 it was 275. This shows that the number of training colleges increased seven times in the course of 25 years.

In 1955 All-India Council for Secondary Education started the nation-wide programme of opening of Extension Services Departments in the training colleges. A start was made by sanctioning 24 Extension Centres in different training colleges in different States. These centres were established in training colleges because training colleges were considered as the only competent agency which had all human and mental resources for implementing the scheme on a large scale. Moreover, in-service education began to be considered to be a part of the activities of teachers' colleges. In fact, in-service education programme was looked upon as a continuation of the pre-service education. Another reason to start Extension Centres in the training colleges was to bring the training colleges closer to secondary schools and to keep the training colleges aware of the problems developing in schools and classrooms. The Extension programme launched by the All-India Council for Secondary Education through the establishment of Extension Services Departments developed gradually. By 1964, ninety-seven Extension Services Departments were established in the country. In April 1959 the All-India Council for Secondary Education was replaced by a new Directorate, viz., the Directorate of Extension Programmes for Secondary Education as a part of the Ministry of Education. The new Directorate took over all the functions of the All-India Council for Secondary Education. In September 1961, the National Council of Educational Research and Training was established as an autonomous body and the Directorate of Extension Programmes for Secondary Education became one of the departments of the National Institute of Education. With a view to developing research in the field of extension, one Extension Research Centre was started in the Directorate of Extension Programmes for Secondary Education for developing effective techniques and procedures in extension work. In 1966 the Directorate of Extension Programmes for Secondary Education was converted into the Department of Field Services under the N.C.E.R.T.

While the programme of educational extension was being developed at the secondary stage a decision was taken in the year 1961-62 to start extension programme for the teachers of elementary schools. The beginning was made through the establishment of about 30 Extension Services Centres attached to primary training institutions in different States. Today there are 45 Extension Services Centres catering to the needs of a small percentage of primary schools in the country.¹

1. *Supra.* Ch. VI.

Educational extension has thus come to stay in the country as the major agency in the programme of quality development in the field of teacher education. The Kothari Commission has also recommended the institution of an Extension Services Department in every training institution beginning from the institutions preparing nursery school teachers to institutions preparing secondary teachers.

VITAL ISSUES IN THE FIELDS OF IN-SERVICE EDUCATION IN THE COUNTRY

As with all programmes there are several issues in the field of in-service education that are sufficiently challenging to warrant careful thinking. There are several major issues.

The need for a hard look at the quality of programmes. The first major issue in in-service education today is the need to have a closer look at the nature and quality of programmes being organised in the country. Even a cursory perusal of the reports of programmes organised by Extension Centres and other agencies reveals that a greater emphasis is laid on discussing methods than understanding new developments in content. In-service education on methods of teaching is necessary. It can be justified, however, when the participants are untrained teachers or where the participants are trained teachers, new developments in methods of teaching are discussed.

At the pre-service education programme, the teachers do get or are supposed to get a thorough know-how of methods of teaching. No such useful purpose is served by discussing the thing which legitimately belongs to the programmes of pre-service education in a programme of in-service education again and again. If a programme of in-service education discusses problems like team-teaching, use of mass media of education, programmed learning or any other new development in classroom teaching is justifiable. But today new developments in methods or content do not find sufficient place in in-service programmes. At present, there is an accelerated development in content as compared to methods. Specially this is so, in regard to Science and Mathematics centres. Even in English teaching, there is a new thinking in so far as the objectives are concerned as well as the content and methods used. These developments can revolutionise the instructional programmes of schools. The in-service education programmes organized through Summer Institutes or those organized by the Central Institute of English at Hyderabad concentrate on these developments. Unfortunately, the large number of programmes organized by Extension Centres and State Departments of Education have still not taken note of these developments in their

in-service education programmes. Recently a few teachers who had attended Summer Institutes for Mathematics and Science had an opportunity to participate in in-service education programmes organized by Extension Centres. These teachers found it difficult to grasp the discussions in these programmes. They felt that the seminar seemed to undo what had been done by the Summer Institute. A few teachers of English too had a similar experience.

The major issue today is to organize the curriculum development programme through in-service education, keeping in mind the new developments, on the one hand, and what is going on in the national programmes, on the other. Unless the in-service education programme touches on curriculum with respect to content, our attempts to bring about improvement in schools are not likely to succeed.

There is another aspect of this problem. At the national level, as a result of studies and research, new programmes are being developed. Here a reference is made to the new syllabus in general science and the one in social studies developed by the National Institute of Education. These syllabuses are the products of thinking by experts over a period of years. These are the tools which can be used to sharpen the edge of understanding of teachers teaching these subjects. It is not necessary that these new programmes should be accepted, first, by the State Departments to warrant a programme of in-service education based on them. A discussion by teachers on these syllabuses by itself will broaden the educational horizon of teachers and may result in their increased ability to do justice to the teaching of these subjects in classrooms. Today we find the syllabuses only decorate the library shelves of the Extension Services, and do not form an integral part of in-service programmes.

Resource Personnel. The second major issue in in-service education is the type of resource personnel employed by Extension Centres in their programmes. Mostly the resource personnel come from teachers' colleges. It is an accepted fact that teacher educators are in need of re-training. They have not been able to keep in touch with new developments in content and even in many cases, in methods. These resource personnel cannot go further than they have done in the pre-service education programmes. We refer here to the content of discussions led by these resource personnel. As far as their own methods are concerned, I mean methods of handling seminars, there is a tendency to adopt the usual lecture approach—an approach that is not suitable in in-service education programmes with small groups of participants. The result is the same hackneyed stuff doled out, using a method that is not in tune with the spirit of in-service education. There is a minimum involvement of the participants reducing further the little possibility that exists for a carry over to classroom situation. This generates unfavourable reactions among

the participants. One of the participants some time ago pointed out that it was no use entrusting the administration of in-service education programmes to teachers' colleges which could not develop even a good pre-service education programme. The issue here is the need to identify the right of resource personnel for in-service education programmes.

Who will Administer the In-service Programme? The third major issue in in-service education programme is regarding the agency that should be entrusted with organizing such programmes. Today, Extension Centres are invariably located in teachers' colleges. The State Departments of Education through their specialised agencies also organize in-service education programmes. As regards the in-service education programmes organized by Extension Centres attached to training colleges, some basic issues have come to the surface. The training colleges are not charged with the responsibility to improve schools. This has been the responsibility of the State Departments of Education and their District Education Officers. In spite of all attempts to know the real needs of schools through advisory committees, we find that the programmes are generally planned by the teacher college faculty, if not by the coordinators or the honorary directors only. There is a tendency to decide upon a programme keeping in mind a particular resource personnel or the availability of some resource personnel from the teacher college faculty consequently these programmes do not meet the needs of individual schools.

Again, it is not physically possible for an extension centre to know the real problems of schools. This is neglected because the training colleges have no responsibility to improve schools. Only the office of the district education officer is in a position to know the needs of schools and teachers, because it undertakes the work of supervision. If school improvement is the administrative responsibility of the district education officer, it is worth-while to try to locate the in-service education agency in his office.

It is argued that the offices of the district education officers are heavily overburdened with administrative work. But so are the training colleges, which are overburdened with pre-service education programmes. We have already entrusted the in-service education in Science to State Departments by establishing Science Education Units in the Office of the Director of Public Instruction. We have already entrusted the in-service education programme in examinations to State Evaluation Units in the Offices of the Director of Public Instruction. If the National Institute of Education has to play a concrete role in bringing about changes in the right direction in our schools, it must face this problem and not run away from it by bypassing these agencies. The role of the State Department of Education and the Offices of the District Education Officers in improv-

ing our schools must be accepted and supported further by opening in-service education agencies in their offices. This can be done on an experimental basis in at least one district in every State.

Involvement of State Departments of Education

The involvement of State Departments of Education in the programme of in-service education was negligible at the earlier stages. Of late, efforts have been made in this direction with some success. Still, this involvement is not of a significant nature. What is required today is to bring about the maximum involvement of the State Departments of Education into this programme of school improvement through in-service education, by helping them to set up a department of in-service education in the State Directorate and assisting them both financially and educationally. Unless a bold step is taken in this direction, we may find that the efforts of extension workers are ineffective to attain the goal. Today in a number of States, there are Guidance Bureaux, Evaluation Units, Curriculum and Research Bureaux, Audio-visual Departments, Science Units, English Language Units and so on. These are some of the agencies aiming at the in-service education of teachers. Given proper guidance and support, these agencies can build up a strong in-service education programme in the States coordinated with the in-service education centres at the offices of the D. E. Os.

Such a programme can yield concrete results. The issue today is to take a bold step to integrate these agencies into a major department of In-service Education in the State. If this is not done, in spite of our best efforts to bring about coordination, we will be confronted with a lack of co-ordination and confusion, the symptoms of which are already visible in some States.

Training In-Service Education Workers

One more issue in in-service education is the acute dearth of trained personnel. The programme of in-service education requires persons trained in extension techniques. Extension is a skilled job, a specialised job. Today, it has been taken for granted that anybody from a teachers' college can be an extension worker. This is not true. Like all other specialised fields, extension education is a special field requiring personnel specially trained for it. Such personnel are lacking at all levels, right from the Extension Centre to the national level. There is a need to develop a good training programme for extension personnel from all departments, including those of the National Institute of Education engaged in in-service education work. They require substantial training in the techniques of extension education.

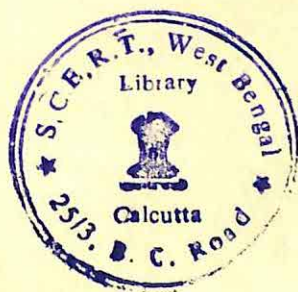
Conclusion

In-service education programme through teachers' training colleges has shown a vital potentiality for bringing about quality improvement both in school education and teacher education at the same time. The programme is expanding at all levels—it has received the support of State Governments and the National Council of Educational Research and Training. A number of innovative ideas are filtering down to schools and classrooms through this programme. Conscious of its deficiencies and the limitations under which it has to operate, the organisers of this programme are improving the content of the programme and the competence of its personnel. If schools are to improve, the only programme that can steer such an improvement programme is a well-planned programme of in-service education through competent teacher educators on the one hand and enlightened administrators on the other. To this end, all efforts to-day have to be directed.

PART THREE

SPECIAL BRANCHES AND ORGANISATIONS

16. Pre-Primary Teacher Education
 17. Physical Education
 18. Training of Guidance Personnel
 19. A Teacher Training Programme for Teachers of English
 20. Training of Teachers for Hindi
 21. Training of Teachers for Other Indian Languages
 22. Teaching of Science
 23. Professional Preparation of Teacher Educators and Educational Administrators—Its Role in National Life
 24. National Council of Education Research and Training
 25. The Indian Association of Teacher Educators
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INTRODUCTION

The success of the developmental plan in pre-school education depends to a very large extent on the quality of the teacher education programme in the country. The teacher educators have to play a leadership role in the progress and development of pre-school education, as they are the people who are responsible for training thousands of pre-school teachers who in turn will staff the pre-schools. Unless the foundation is sound, no solid edifice can be built up. A good training programme based on the findings of current research on the growth and development of the pre-school child is essential for the progress of pre-school education.

A pre-school teacher has to play multiple role. As a teacher, she is responsible in that the children under her charge are stimulated to achieve the maximum of their potential. She helps the child to develop physically, socially, emotionally, and intellectually by means of different programmes organized in the school. To ensure proper development of the child, it is also essential to keep in touch with the home. In many cases, it is the home that needs more care. A large number of our parents need assistance in the caring of their children either because they cannot afford to provide the proper environment for their children or because they do not know how to do it or because of both. Here the teacher has to assume the role of the parent educator. So a pre-school teacher is a teacher, a playmate and a mother to the children and a counsellor to the parents. To fulfil these roles effectively, she has to be adequately trained.

History and Present Position of Pre-School Teacher Education

As early as 1888, Kindergarten classes were added to the Saidapet High School, Madras. The trainees of the Saidapet Teachers' College had to do a part of their practice teaching in this school. Later on, a number of secondary and elementary teacher education institutions started courses in Kindergarten. The details of one of the courses has been given elsewhere.¹ The Christian missionaries also did pioneering work in this field.

1. Supra. pp. 17—18.

The first full-fledged training institute was, however, set up in 1936 at Vepery in Madras by a Christian missionary. It is still in existence and runs an effective programme. Madam Montessori's visit to the country in 1939 gave an impetus to the progress of pre-school education on Montessori lines. However, prior to 1947, very little attention had been paid to pre-school education in general and pre-school teacher training in particular. In spite of the strong recommendations of the Sargent Report, nothing much was achieved in this field. But after 1947, there was a slow change for the better. Nevertheless even today the states have not taken direct responsibility for pre-school education but many states have started pre-school teacher training colleges. However, pre-school education still owes its progress to private enterprise. In addition to the pre-school training institutes run by the State Governments or recognised by them, the Indian Council for Child Welfare started its Balsevika Training programmes in 1961 at Delhi. It runs an integrated course of eleven months' duration for pre-school teachers termed as Balsevikas. Later in 1963, the Central Social Welfare Board started its training programme for pre-school teachers for rural areas. Given below is a list of the different types of pre-primary training programmes in the country.

TABLE 26
PRE-PRIMARY TEACHER TRAINING PROGRAMMES

Serial No.	Type of programme	Run or recognised by	Duration
1.	Teacher Educators' Training in Early Childhood Education	National Council of Educational Research and Training	9 months
2.	Graduate-level training in Early Childhood Education	Department of Child Development, M. S. University of Baroda	1 academic year
3.	Teacher Training in Pre-Primary Education	State Departments of Education	1 or 2 years
4.	Balsevika Training for urban areas	Indian Council for Child Welfare	11 months
5.	Balsevika Training for rural areas	Central Social Welfare Board	2 years
6.	Montessori Training	Association Montessori International	Unspecified
7.	Other short term courses	Private agencies	Unspecified

Training for teacher educators in pre-school education.—The National Council of Educational Research and Training recognising the need for improving the personnel of the pre-school training institutions started a course for teacher educators in pre-school education in 1963 in Delhi. In 1965 the National Council of Educational Research and Training started a parallel course at Gandhigram, Madras, for the convenience of the candidates from the southern zone. In order to attract candidates of the best quality, the National Council of Educational Research and Training gives a stipend of Rs. 200 to each trainee. Besides these two programmes of the National Council of Educational Research and Training, the only other programme at the graduate level is run by the Department of Child Development, University of Baroda.

Teacher training in pre-primary education.—Many of the States now have recognised pre-primary teacher training institutes. In some States, the Government itself runs the colleges, whereas, in other states like Maharashtra, the course is run mostly by the private institutions which receive grant-in-aid from the Government. The course is of two years' duration in states like Madras, Bengal and U. P. but it is of one year's duration in states such as Gujarat, Maharashtra, etc. The minimum requirement for admission is generally a high school leaving certificate. Gujarat and Maharashtra also run a two-year course for those who hold a primary school certificate, the duration of which is two years. The following tables show the state-wise distribution of pre-primary teacher training institutions.

TABLE 27

STATE-WISE DISTRIBUTION OF PRE-PRIMARY TEACHER TRAINING INSTITUTIONS

State	Number	State	Number
Andhra Pradesh	2	Maharashtra	12
Assam	1	Mysore	7
Delhi	1	Punjab	3
Gujarat	10	Rajasthan	3
Kerala	3	U. P.	8
M. P.	4	West Bengal	4
Madras	4		

Balasevika Training Programmes.—Balasevika training programme was originally started by the Indian Council for Child Welfare.

Later when the Central Social Welfare Board also started the training, it was decided that the Indian Council for Child Welfare will train Balasevikas for the urban areas whereas the Central Social Welfare Board will train them for work in the rural areas.

The Balasevika training aims at an integrated approach and covers in addition to the usual education programme, courses in nutrition, methods of social work, recreation, etc. The course is more welfare-oriented in its nature. The minimum qualification for the Indian Council for Child Welfare course is High School Certificate, whereas, for the Central Social Welfare Board course, a middle school certificate is adequate. The following table shows that state-wise distribution of Balasevika Training Centres.

TABLE 28

THE STATE-WISE DISTRIBUTION OF THE BALASEVIKA TRAINING PROGRAMMES

State	ICCW	G.S.W.B.
Andhra Pradesh	...	...
Assam	...	1
Bihar	1	...
Delhi	1	...
Gujarat	1	1
Kerala	1	...
Madhya Pradesh	1	1
Madras	1	...
Maharashtra	2	...
Manipur	1	...
Mysore	1	1
Orissa	...	1
Punjab	1	...
Rajasthan	1	...
Uttar Pradesh	1	1
West Bengal	1	...
Total	14	6

Montessori Training.—Some of the state recognised institutions mentioned earlier run their courses on Montessori lines. In addition to these institutions, the International Montessori Association runs short-term courses at different parts in the country. Many of the states have recognised this Association's training. There are now hundreds of pre-school teachers who are trained by this Association.

Other short term courses.—Short courses in pre-school education are also organised by many other institutions. The centre for Cosmic Education, Allahabad, for instance, runs short courses from time to time in various places.

Madras State ran a short term course of 3 months' duration to train the village women for pre-school work. The training was given by the Mukhya Sevikas of the blocks. This scheme needs special mention because of its inexpensiveness. Village women with a minimum educational qualification of Standard VIII were trained and placed in village pre-schools on a monthly honorarium of only Rs. 20. In many cases, the pre-school teacher or the Balsevika is also the Secretary of the mothers' groups. This should get her more support and co-operation from the parents in running the programme. The Madras Scheme is unique in that the State recognised the need for pre-school education as fundamental as the provision for primary education. To quote in full from the Government Order 180 dated 20 January, 1962, "the object of providing compulsory primary education to all children is to ensure that they will receive the basic minimum education which is necessary to equip them for the diverse and varying occupations of later years and which will enable them to grow into active and useful citizens. It is at the same time recognised that the need for imparting pre-primary training to children in the formation of correct habits of mind and body which will constitute the basis for informal education at the primary level is as fundamental as the provision of primary education itself."

Survey of The Pre-School Teacher Training Colleges

Response.—As per request of the Education Commission chaired by Dr. D. S. Kothari, the Department of Psychological Foundations of the National Council of Educational Research and Training designed an inventory for the survey of pre-school teacher training colleges. The survey was conducted by various regional centres. Though almost all institutes were contacted, only 42 institutes participated in the study. Out of the 42, 11 institutes from the Maharashtra State responded to a modified version of the inventory. The Maharashtra centre in their attempt in translating the inventory modified it considerably and, therefore, the results had to be treated separately.

Though the data from all the institutes are not available, it is felt that the sample under study is fairly representative and the data

obtained should give us an idea about the condition of the pre-school training institutions in the country. Therefore, the data is made use of in answering the queries regarding the position of pre-school teacher institutions.

As many as 42 institutions responded to the study. Of these, one was from Assam, one from Delhi, five from Gujarat, two from Kerala, two from M. P., two from Madras, eight from Mysore, eleven from Maharashtra, one from Punjab, two from Rajasthan, five from Uttar Pradesh and two from W. Bengal.

Out of these 42 institutions under study, 8 are government institutions, one is attached to a university, 30 are recognised by either the State or the Central Government or by both, while three are unrecognised institutions.

Of these the first institute to be started was Nursery Training Centre, Vepery, Madras. It was established in 1936, and the latest is the Balsevika Training Camp, Gauhati, which was started in February, 1965. In the period from 1947-52, five institutions were set up, one in Gujarat, one in Madras, one in Mysore and two in U. P. In the period 1953-58, ten institutions were started, two in Gujarat, one in Kerala, two in Madhya Pradesh, one in Mysore, two in U. P. and two in West Bengal. Fourteen were started in the period 1959-65—one in Delhi, two in Gujarat, one in Kerala, five in Mysore, one in Punjab, two in Rajasthan and two in U. P. In Maharashtra, two were started from June, 1964. The others were established during the last decade.

The training period is two years in Madras, U. P. (recognised institutes) and West Bengal, in the Balsevika Training Centre, Gauhati, (Assam), and in Gujarat and Maharashtra (for P. S. C. candidates only). In the remaining institutions the training period is one year.

Selection procedures.—Almost all the institutes advertise details of the training programme in newspapers. The time given for receipt of applications ranges from two weeks to twelve weeks. Some institutions charge a nominal fee for application form and prospectus. Most of the institutions hold an interview on the basis of which candidates are selected. Some institutions also conduct an entrance test, which is generally a test of general knowledge. The P. S. C. candidates seeking admission to the course in Gujarat have to pass a test in languages, general science and social studies, the subjects in which they are given training after selection.

Essential Qualifications.—All the institutions in Gujarat, five institutions in Mysore, one in Madras and the Balsevika training programme in Gauhati lay down middle school pass certificate as the minimum qualifications for admissions. However, Gujarat runs

a two-year course for middle-pass where it is only one year for the S. S. C. candidates.

In the remaining institutions with the exception of Chetan Balwadi (Baroda) Post Graduate Diploma Course and the Chittaranjan Teachers' Training Institute, the minimum qualification for admission is matriculation. In the Chetan Balwadi, a graduate degree is required, whereas, the Chittaranjan Institute admits only those who have passed higher secondary or intermediate examination.

Some institutions also prescribe age limits. The minimum range is from 16 to 18 and the maximum is from 24 to 30. Only in Balsevika Training Centre, Chandigarh, the maximum age is 35 but it admits only such candidates who are deputed by organisations with a guarantee of absorption in service after training.

It will be necessary to lay down some desirable qualifications for admission. A good division, higher qualification than which is essentially required, aptitude for music, drama and other fine arts and experience in nursery school education, are some of the other desirable qualifications for admission to the course.

Number of Seats.—The number of seats in about 17 institutions ranges from 40 to 60. It ranges from 80 to 135 in five institutions, and 20 to 32 in other five institutions. Two of the institutions have less than 20 seats.

Number of applicants.—Generally speaking, the total number of applications exceeds the maximum intake capacity. The exceptions are the institutions at Ahmedabad, Nadiad and two of the three institutions at Bangalore. The institutions at Bhavnagar, Alleppy, Kozhikode, and Jabalpur and the Government College, Allahabad are particularly flooded with applications whereas, in the remaining institutions, the number of applications is not significantly larger than the intake capacity. The Balsevika training centres also receive a large number of applications perhaps because of the stipend of Rs. 600 per annum that is given to the trainees.

Instructional Programme

The instructional programme of the institutes is treated in 3 parts: (1) Theory, (2) Practical work, (3) Practice teaching.

(A) Theory

Theory includes as many as nine courses. The details of the different courses are given below :

Principles of Education.—It is taught either as a separate paper or as a part of another paper in the majority of the institutions. Only

five institutions do not offer it, but all these institutions offer courses in nursery school education.

History of Education.—It is offered as a full paper in Gujarat, Mysore and West Bengal. Gauhati, Kerala, Madras, Chandigarh and U.P., The course deals with contributions of Froebel, Montessori etc., in pre-primary education.

School Administration.—It is a full paper in Madras and Balsevika Training Centre, Chandigarh. But the topic on maintenance of files, records, etc., is studied in all the remaining institutions.

School Organisation & Management.—Gujarat, Kerala, Mysore, Punjab, U. P. and West Bengal offer it as a full paper. In the remaining institutions, a part of it deals with requirements of a good school site, furniture, etc.,

Parent and Community Education.—It is a full paper only in Delhi and Chetan Balwadi. But the aspect relating to parent-teacher relationship is covered in most of the other institutions.

Methods of Teaching.—More emphasis is laid on general methods of teaching in the recognised institutes of U. P., and West Bengal while Chetan Balwadi, Kerala, Mysore, and the unrecognised institutes of U. P. deal at length with methods of teaching specific subjects. Nursery methods of teaching are done in details in the Vepery Institute at Madras and in West Bengal. Montessori methods are done in detail at Thiruramivur Centre at Madras, while kindergarten methods are done in Chetan Balwadi (Post-graduate Diploma) and West Bengal.

Health and Nutrition.—It is offered either as a full paper or as a part in almost all the institutes, though there is considerable variation in the course content.

Child Psychology.—It is covered in all the institutes. While the course outline varies from one to the other, the aspects relating to physical, motor, emotional, intellectual, and social development of the child are done in all the institutes.

Course in Liberal Education.—They are offered only for the P. S. C. level course in Gujarat and in Gauhati institute.

(B) Practical Work

Dance, Drama and Music.—It is done in almost all the institutions. It comprises of the study of nursery rhymes, action songs, children's songs, dance tunes, etc.

Art and Craft.—Art and craft activities are also carried out in all the institutions. In most of the institutes the art work consists

of creative activities such as drawing, painting or decoration, while the craft work includes clay modelling, toy-making, sewing, etc. The institutes in Kerala do a full detailed practical paper in craft work.

Physical Training.—It is done in some form or the other in almost all the institutes except those at Delhi and Mysore and Chetan Balwadi and the Centre of Cosmic Education. It includes rhythmical games, drill, free movements, simple exercises, etc.

Field work.—Field activity is a requisite in a good number of institutes. It mainly includes home visits. Some of the other activities are camping, visits to Balwadis and welfare extension projects, observation of community life, organisation of parent-teacher meetings, recreational programme for children, and exhibitions, planning health care programmes, etc.

Child Study.—Some institutions require the students to make a study of a single child or a group of children by making periodical observation.

Record-keeping.—It involves the maintenance of different records and forms a part of the course in some of the institutes.

Health, hygiene and nutrition.—Only the two Balsevika training centres have a full practical paper on health, hygiene and nutrition. Health practicals consist of care of children, keeping a record of their height and weight, use of thermometer and administering first aid. The course in hygiene includes elements of nursing and also environmental hygiene. Nutrition course includes protection of foodstuff, how to purify water and preparation of simple food for children. Sense training and training in practical life exercises are given in some of the institutes by making use of the sensorial material.

(C) Practice Teaching Programme

All but two of the training institutes have attached demonstration schools which are generally utilised for purposes of demonstrating good teaching, for actual practice teaching and for observation of children.

Eleven of the institutions use only one school for practice teaching, six of them use three schools while the remaining use more than three. On an average the number of student teachers sent to one school is about 15, while the range lies between 5 and 2. The number of supervisors ranges between 1 and 12 though in majority of the institutions the range is between 1 and 4. The number of class room teachers with whom the student teachers work in the practice teaching schools ranges between 3 and 7 in most of the institutions.

There is a wide variation between the institutions as regards the time spent in actual class room practice teaching or in lesson plan

preparation, discussion of lesson plans or observation of children. Actual class-room practice teaching hours range from 7 hours to 400 hours. The range is from 9 to 300 hours for lesson plan preparation, 9 to 100 hours for discussion of lesson plans, and 20 to 400 hours for class room observation.

Evaluation Procedures

Most of the institutions follow an evaluation procedure which is partly internal and partly external. The minimum percentage for passing varies generally from 35 to 40 per cent but most of the institutes require separate minimum for theory, practice teaching and practical work. Year's work and performance in sessional examinations are taken into account in the assessment of the students in many of the institutions.

The total number of marks for the examination and the marks for each subject varies from one institution to the other. A rough picture may be arrived at by looking at the weightage given to the theory, practice teaching and practical work. The weightage given to the theory ranges from 44 to 80 per cent though the majority ranges from 50 to 69 per cent. Many institutes do not distinguish between practice teaching and practical work. Taking into account only those that have separately given, weightage for practice teaching ranges from 7 to 25 per cent and for practicals it ranges from 16 to 40 per cent.

The Staff

Training.—The number of full-time staff members in the institutes ranges from 1 to 14. Out of 30 institutions which have given the figures, 10 employ 1 to 2 full-time staff, 13 have 3 to 4, 3 have 5 to 6 and 4 have more than 6. As regards part-time staff, 20 institutions employ them. The number appointed ranges from 1 to 10. 13 have 1 to 2 part time staff, 4 have 3 to 4, and 3 employ more than 5.

Out of the 176 staff members (118 full time and 58 part time), 60 of them have received some kind of training in pre-primary education. The break-up of the 60 members is as follows:

TABLE 29
QUALIFICATIONS OF THE TEACHING STAFF

Type of Training	Number
Pre-primary training plus training in allied subjects (music, dancing, etc) plus graduate/post-graduate degree	3
Pre-primary training plus graduate/post-graduate degree in Arts/Science and Education	18
Pre-primary training plus Graduate/post-graduate degree only in Arts/Science	6
Pre-primary education plus intermediate/matriculation	18
Only pre-primary training	5
Total	60

Fifty-five teachers have received training in allied subjects such as music, drawing, dance, etc. The break-up of these 55 teachers is as follows :

TABLE 30
TRAINING IN ALLIED SUBJECTS

Subject	Number
Training in allied subjects plus graduate/post-graduate degree in Arts/Science and Education	4
Training in allied subjects plus graduate/post graduate degree only in Arts/Science	8
Training in allied subjects plus intermediate/matriculation	16
Only training in allied subjects	27

Thirty-six candidates have received teacher training though not at the pre-primary level. The break-up of these 36 is as follows :

TABLE 31
QUALIFICATIONS OTHER THAN PRE-PRIMARY TRAINING

Qualifications	Number
Post-graduate degree in Arts/Science plus degree in Education	15
Degree in Arts/Science plus post-graduate degree in Education	2
Degree in Arts/Science plus degree in Education	17
Degree in Arts/Science plus Certificate in Teaching	2

The rest of the 25 candidates have no special qualifications to be on the staff of the pre-primary teacher training institutes. Their break-up is as follows :

TABLE 32
STAFF WITHOUT SPECIAL QUALIFICATIONS

Qualifications	Number
Post-graduates in Arts/Science	11
Graduates in Arts/Science	12
Intermediates/Matriculates	2
Total	25

As regards the principals/heads of institutes, only 11 of them have training in some kind of pre-primary education. All of them are graduates or post-graduates and twelve of them have degrees in Education.

Scale of Pay.—The designation of principal is used for the head of the institute in almost all the institutes except in four, where the term "head of the department" is used. In some of the institutes both the posts of Principal and the Head of the Department exist. The pay of the principal/head of the department varies considerably from one institute to the other. It ranges from a scale of Rs. 800-50-1,250 to a consolidated amount of Rs. 120. The initial basic pay of the head of the department where the post of the principal also exists ranges from Rs. 325 to Rs. 120.

The post of lecturer exists in most of the institutes on a regular pay. The initial pay ranges from Rs. 110 to Rs. 250 though in most of the institutes the range is from Rs. 150 to Rs. 200. In three institutes, it is Rs. 250 and in another three, it is less than Rs. 150.

Generally part-time persons are appointed as teachers of music, art, craft, etc. They are usually given a consolidated amount per month which ranges from Rs. 15 to Rs. 125. A few of the institutes have them on the regular post in which case their initial basic pay ranges from Rs. 110 to Rs. 130.

Most of the principals are given residential accommodation. Provident fund facilities and pension or gratuity are given to the staff of most of the institutes.

In Maharashtra, out of the 11 respondents 8 institutes have the contributory Provident Fund Scheme for their staff and one has the pension scheme.

School Plant

Library.—Almost all the institutes have a library in their premises but only seven of them have a reading room attached to the library. There is a large variation in the number of books in the library. In the number of general books, it varies from 2 to 2,500; in professional books, it varies from 10 to 2,500; in children's books, the range is between 20 to 1,710. As regards journals, it is found that on an average each institute obtains 3 to 4 journals in Indian languages. Indian journals in English are subscribed by 12 institutions, while 4 institutions subscribe to foreign journals. However, the information regarding the library is not complete as about eight institutes did not respond to this item.

Workshop and Art Room Facilities.—Six of the institutes have a separate workshop but in nine more institutes workshop activities

are carried out even though no separate workshop is available. Similarly nine institutes have a separate art room but art activities are carried out in six more institutes though they have no separate art room.

Building

Out of the 31 institutions under study, 12 institutions have their own buildings. Fifteen institutions are located in rented buildings whereas 3 enjoy rent free accommodation. One institute did not supply any information. In Maharashtra out of 11, 3 colleges have their own building, 7 are run in rented buildings and one is in a building without any rent.

The owned buildings were generally built for purposes of housing a college. In most of the rented buildings, the buildings were adapted for this purpose. Out of 29 institutes reporting on the condition of their buildings, 7 of them have excellent buildings, twenty report it to be satisfactory and two to be poor.

In Maharashtra, five out of the 11 institutes have adequate and convenient accommodation whereas the others find the accommodation either inadequate or inconvenient or both. Nevertheless, all the institutes have adequate water, electricity and sanitary facilities.

Most of the institutes including those in Maharashtra are located in urban areas. The facilities for transportation in the case of the majority of institutes are reported to be good. The practice teaching schools in most of the institutions are either in the same premises or adjacent to them.

Finance

Out of the 19 institutions that reported the income and expenditure figures and sources, it is found that 13 were having deficits, three had savings, 2 had at times deficits and at times savings. The other 12 institutions did not give the figures.

The main sources of income for most of the institutes were from government grants and fees. Only five of the institutes do not receive grants from the Government. These institutes derive their income mainly from the fees and also from the contributions from the management. The item of expenditure is mainly the salary of the staff. In a few institutes, it comprises also stipends and rent.

In Maharashtra, out of the 9 institutions that responded to the study, seven of them receive grants from the Government. Three institutes ran in deficit for the year 1963-64 for which figures were available. The range of deficit is from Rs. 1,000 to Rs. 11,000. The

items of expenditure are mainly the salaries of the staff and the rent of the building.

Special Problems In Pre-Primary Teacher Education

General.—Pre-primary teacher education is at present faced with certain acute problems. For instance there is a crying need for trained teacher educators. It is found from the teachers' qualifications that only about one-third of the teachers have had any kind of training in pre-primary education. Unless the teacher educators are well-trained, one cannot hope for good training for the teachers.

Another problem is with reference to the teacher educators' pay and their working conditions. There is too much variation from one institute to the other. In many of them, the pay is too poor to attract qualified teacher educators. It is high time that these aspects are standardised so that the quality of the teachers whom they train does not suffer. The State Governments should insist on certain minimum conditions for all the training institutes. No institute that does not fulfil these criteria should be allowed to operate. The State Governments should lay down standards of training and make arrangements for conducting examinations on the completion of the course of training.

Many institutes need to revise their course content. It has become obsolete and needs immediate revision. A seminar and a workshop in this connection will be most useful. Similarly the evaluation procedures followed in the institutes should also be improved considerably.

Another aspect which should be looked into is the preparation of equipments. Every institute must have a good stock of children's literature, pictorial material for children and other play equipments. A workshop where the trainee can learn how to manufacture and repair equipments is most essential in every institute. Guide-books for teachers will have to be prepared.

The libraries should be strengthened in many of the institutes and the students and staff should be encouraged to make better use of the library.

The need for developmental programme.—At present facilities for teacher preparation in pre-primary education are very limited. There are about 80 training institutes including the Balsevika training centres and if each institute turns out on an average 40 trained teachers, the annual turn-out works out to be 3,200.

Even if we aim to get only 10 per cent of the population of children between the ages of 3 and 5 in pre-schools, during the Fourth Plan

period, we need 1,49,000 trained teachers, keeping a pupil-teacher ratio of 20 : 1. To produce 1,49,000 trained teachers within five years, we must have 745 training schools with each school training 40 students from the first year of the Fourth Plan period. Therefore, a crash programme for the preparation of teachers is most essential if we want trained teachers in our pre-schools.

There is sufficient research evidence to indicate that pre-primary education is necessary and advantageous for all children and the more deprived the home, the greater is the need for some pre-school training. Nevertheless, India today cannot perhaps afford to spend a large amount in pre-school education. Therefore, a cheaper kind of pre-school education like the system that is adopted in Madras State may have to be resorted to on a large scale. We may have three kinds of schools, viz., (1) A type having complete equipment and full trained teachers, (2) B type with minimum equipments but having trained teachers and (3) X type schools with minimum equipments and in-charge of local women with lower educational qualifications who have received a short training for a period of 3-5 months and who draw a small honorarium.

Under the scheme, we may have to think of teacher preparation at three levels :—(1) Training of teacher educators to staff the teacher training institutes, (2) Training of teachers to staff the 'A' and 'B' type schools, (3) Training of teachers to staff the 'X' type schools.

Training of Teacher Educators.—The course should be designed to develop knowledge, understanding, skills and attitudes which are essential to the teacher educators, and should aim at training the teaching staff of pre-primary teacher training institutions, supervisory and inspectorial staff and the heads of nursery schools. Minimum qualifications for admission should be a graduate degree plus experience in pre-school education. The duration of the course should preferably be of two years so that it can be equated to a Master's level programme in pre-school education. But as the employment prospects are not so bright now, for the time being it may be feasible to run it only as a one-year programme.

Training of teachers for 'A' and 'B' type schools.—This training programme should be broad-based and should not only include professional courses but also orientation courses in working with parents and the community. These teachers should not only meet fundamental needs of children but also be responsible for guiding the parents in rearing the children. They should be able to make the community aware of the significance and need for pre-school education.

The qualifications for admission should be the completion of the Secondary School and the duration should be of two years. Pre-primary training should have the status of primary training.

Training of teachers for 'X' type schools.—It is clear now as a result of many try-outs that pre-school education can be expanded to the backward and rural areas successfully only if we can get the local women to run the schools. A considerably simplified training course will have to be run for these women. The course should be practical in its approach and should emphasise the fundamental principles of child development. The duration of the course has to be necessarily short in order to enable the local women to undergo the course. A duration of 4-6 months will be most desirable but the course should be necessarily followed up by a series of refresher courses. The minimum qualification for admission should be primary school pass certificate.

Here one should carefully consider the question of the agency that will impart this training. We should not repeat the mistakes committed by the Madras State in asking the Mukhya Sevikas to impart the training. It is a most difficult job even for an experienced institute as it involves training persons with the very minimum of qualifications. For the success of the course, it is most essential that the training is given by institutions with certain special facilities and atmosphere. The trainees should have adequate opportunity to see and play with the equipments, to see the children at play, to see and participate in the parent education programmes, to sing, dance and dramatise. They will have to be freed from their rigidity and should be encouraged as much as possible to develop their spontaneity.

For this purpose, it is most desirable to start rural pre-school development centres on a large scale that will take up this type of training. These centres should be made responsible for training the teachers for 'X' type schools. These centres must have a demonstration school, a library, a museum, a workshop, a health clinic for children and a mobile extension unit and a recreation centre for children.

Each centre should be able to train at least two batches of trainees every year, each batch consisting of at least 40 students. It should provide hostel accommodation for the trainees and residential accommodation for the staff.

The local women so trained should play the leadership role in promoting pre-school education in the rural areas. They should be helped from time to time by the centres by giving them refresher courses. It is most important that each of these centres should be located in a rural area.

Better Facilities For Training

Suppose the target is to staff the pre-schools for 10% of the age-group 3—5 population during the Fourth Plan period. It means having 1,49,000 trained teachers. If the number of pre-primary training

institutes is increased from 80 to 600 in the urban and semi-urban areas by the end of the Fourth plan, it should give us about 47,000 trained teachers.

As a large percentage of the population is in the rural areas, we may assume there will be more need for teachers to staff the rural pre-schools. For this purpose, the Pre-school Development Centres will have to be started on a large scale. The programme may be phased as follows :—

One in each state in the first year, 5 in the second year, 10 in the third year, 20 in the fourth year and 50 in the 5th year. Thus, by the end of the Plan period, there will be in total 1,290 development centres working in the rural areas of the country, training more than a lakh of teachers.

Such programmes of development in teacher education necessarily lead to the training of more teacher-educators. More universities and other high level organizations of research and training should be encouraged to start separate departments of child development and childhood education and organize master's level courses in pre-school education.

Finance.—Many educational planners in the country are convinced of the need and significance of pre-primary education. Nevertheless, when it comes to the provision of finances, they are baffled with the problems of finding sufficient resources. It is indeed a serious problem but by ignoring it one does not solve it. Just as we meet the expenditure of primary and secondary education, we will have to attempt to find the resources for pre-primary education too. We know beyond doubt that the rate of development is fastest in the early childhood stage and the child at this stage gains maximum from an enriched environment. In spite of it, why should we insist in ignoring this stage and concentrate on stages which are by far slower and less profitable so far as receptivity to education is concerned ?

Again, if we take a look at the figures of wastage in Class I, we find that it is more than 40 per cent. The amount expended on account of wastage only works out to 18 crores of rupees per year. It is agreed that one main reason for wastage at Class I is poor preparation for schooling. The child being new to school does not attend it regularly and does not settle down easily to school procedures. This can be easily avoided if the child is given some pre-school education. If an equivalent sum that is already expended on account of wastage is spent on pre-school education, it is quite possible that the problem of wastage can be solved to a great extent.

One may also consider the expenditure incurred on family planning and social education, in this context. These programmes

usually do not succeed if they are done in isolation. It should necessarily revolve round the child and pre-schools perhaps may be one of the best centres through which these programmes can be operated. Pre-schools can have it as one of their parent education programmes.

It may be true that with limited resources at hand it may not be possible for us to provide pre-school education for all in the near future. But let us take a stand that it should be our target. To achieve it, we may plan in phases.

BACKGROUND

The importance of physical education has been recognised since the dawn of history. The ancient Greeks laid a great stress on the symmetry of body and mind. "The fair mind in the fair body will be the fairest and loveliest of all sights to him, who has the seeing eye." This has been called the aesthetic conception of physical culture.

The ancient Indians also paid a good deal of attention to bodily fitness. Kalidas prescribes a sound body as a pre-requisite for a 'dharmic' life: *Sariram Adyam khalu dharmasadhanam*. In the Buddhist universities of Nalanda, Vikramshila and Vallabhi, swimming, wrestling, shooting arrows, swordsmanship and breathing exercises were considered as essential.

Physical education was in a neglected condition in this country at the time of the advent of the Europeans. It was only in 1875 that the MacLaren's system of gymnastics was introduced in the school curriculum in Madras. Very soon, some forms of drill, physical training and games were prescribed, though in a restricted sense, in most of our schools. In the absence of well-trained teachers, the work was entrusted to ex-army personnel or gymnasts, and wrestlers.

Systematic and scientific teacher training in physical education is comparatively recent in our country. The beginnings of this may be traced back to 1920, when the late Mr. H. C. Buck founded a training centre in Madras, under the auspices of the Y.M.C.A. With the increasing attention given to physical fitness, the need for more trained teachers became apparent. Several colleges, offering one-year courses modelled on the Y.M.C.A. College at Madras, were established in various States in the country.

Types Of Training Institutions

Today, there are as many as 49 institutions offering training courses in physical education to teachers. Out of these, three institutions are affiliated to universities and offer a post-graduate degree/diploma in Physical Education. These are:

1. Department of Physical Education, Panjab University, Chandigarh.—M. A. in Physical Education.

2. Government College of Physical Education, Patiala, Panjabi University—M.Ed. (Physical Education) and B.P.E. (Bachelor of Physical Education).
3. Lakshmibai College of Physical Education, Gwalior (M.P.) Jiwaji University—M.P.E. and B.P.E.

In addition to the above, there are fifteen more institutions, which conduct post-graduate diplomas in physical education. These diplomas are awarded by the State Governments in their respective geographical units. The rest of the institutions offer a certificate course in Physical Education. The institutions offering diploma courses usually provide instructors' certificate course also. In such cases the theory classes are held separately for the two types of courses, the activity courses being common.

Management

The institutions are managed by the Government, universities and private trusts. As many as thirteen institutions are run by State Governments. The Lakshmibai College of Physical Education, Gwalior is an all-India Institute. It is sponsored by the Ministry of Education, Government of India and is managed by an autonomous board.

The Kalyani University and the Panjab University have their own Departments of Physical Education. A few institutions like Sheth C. N. Vyayam Vidyabhavan, Ahmedabad, Christian College of Physical Education, Lucknow and S. P. Mandali's Shareerik Shikshan Vidyalaya, Poona, are administered by private educational trusts. The rest are individual institutions managed by private trusts.

As many as twenty-two institutions offer only Certificate Courses. They are in the Maharashtra. It may be noted that 10 institutions are purely residential and the rest admit non-resident students also. The lodging and board charges per head per annum come to Rs. 1,000 and Rs. 450 respectively.

Curriculum

The subjects usually included in the course of studies for diploma and certificate are : (1) Principles of Physical Education ; (2) History of Physical Education ; (3) Organisation and Administration of Physical Education and Recreation ; (4) Anatomy, Physiology and First Aid, (5) Health Education ; (6) Methods in Physical Education, and (7) Coaching of Games and Sports.

In addition to the above, the degree courses include General Education (subjects like English, Hindi, Social Studies and Science), professional subjects (Kinesiology, Corrective Education Principles of Education and Psychology, and Recreation).

Post-graduate degree courses comprise advance levels of professional preparation like Philosophy and Principles of Programme Planning, Mechanical Analysis of Motor Movements, Supervision, Recreation, etc., with options for specialisations, and a dissertation.

The practical part of the different courses (certificates, diploma or degree) consists of instruction in calisthenics, gymastics, ball games, like football, hockey and cricket, indigenous activities like *lathi*, *lazim*, *asanas*, minor games, indigenous games like *kabadi* and *kho-kho*, swimming (wherever, facilities are available), track and field and minor games. Practice teaching is the crucial part of the entire programme.

Selection of Trainees

The selection of trainees is usually done on the basis of scrutinising of credentials and interview. Most institutions have a policy of special tests for assessing physical skills. A few have adopted the 'National Physical Efficiency Tests' for assessment. The Government College of Physical Education, Rampur, administered aptitude tests, prepared by its State Bureau of Psychology.

The age requirement ranges from 17 to 30 years with relaxation up to 35 years in exceptional cases. The academic requirement is SSLC or equivalent for Certificate Course except in the Uttar Pradesh where the minimum is a pass in 'Intermediate'. The academic requirement for a diploma course is a basic degree (B.A., B.Sc., B.Com. or B.Ag.), that for a degree course is a pass in the Higher Secondary or its equivalent, and that for post-graduate degree is a basic degree in Physical Education or a basic degree in any other subject with a post-graduate diploma in Physical Education.

Evaluation Procedures

Proficiency in theory courses is evaluated by the annual external examination conducted either by a university or by the State Department or Board of Education. In most cases sessional marks are allowed, in the case of Certificate in Physical Education in the Maharashtra to the extent of 50 per cent. The proficiency in theory course is usually assessed internally except in the Maharashtra. Teaching skill is assessed by internal instructors, the lessons assessed ranging from 15 to 40. Annually one or two lessons are also assessed by external examiners. Usually there is a parity in maximum marks allotted to internal and external assessment. A candidate has to pass separately in each of the three parts, *viz.*, Theory, Practice and Teaching Skills. A few institutions have included 'officiating' separately under Teaching Skill.

Besides attending at a game for periods ranging from 10—15 days, skill in First Aid also forms part of the requirement for getting a certificate, diploma or degree.

The average expenditure, which students bear per year for the certificate and diploma courses, is Rs. 1,000. The cost of training him is estimated to be about Rs. 500 per year. This seems to be a gross under-estimation in view of the fact that the student-teacher ratio is low and the overhead cost in running an institution is rather high. On an average the student strength of these institutions ranges from 8—60.

The majority of institutions depend on government grants and tuition fees. The tuition fee approximates to Rs. 250 per annum, ranging from Rs. 120 to Rs. 300. A few institutions derive income from endowment funds and donations. Usually the State Government awards 50 per cent of admissible expenditure as recurring and 25 per cent as non-recurring grant. The Central Government gives matching grants for the construction of gymnasia, hostel-buildings, etc. But very few institutions have availed of this opportunity, as they are unable to provide for the matching fund.

Staff

There is an acute shortage of staff. In fact the staff-student ratio is pretty high, 1 : 9 or so. However, it is to be noted that except in a few government sponsored institutions, no trained librarian is appointed. Many institutions being small, a teacher may have to teach a number of activities, in which he might not have attained proficiency. A few institutions resort to appointing specialists (untrained) on a part-time basis for instruction in some activities. The subject of Anatomy and Physiology is usually taught by a medical man having no training in methodology of teaching. His services are availed on a part-time basis. He also functions as a medical officer of the institution.

The qualification of the principal of an institution offering certificate course only is usually a degree with diploma in Physical Education or a degree in Physical Education. In a few cases a trained graduate with diploma in Physical Education is insisted upon. In institutions offering diploma courses, the principal has to possess a post-graduate degree with diploma in Physical Education. Lecturers should also have a degree with D.P.E. or a degree in Physical Education. Persons with lesser qualifications are appointed as instructors.

Building

A building usually consists of an office room (this also serves as the principal's office), one or two class-rooms, a library-cum-staff room, in a few cases a gymnasium-cum-store room. Many institutions cannot afford to have even an indoor-play area, swimming pool, study halls, etc. They have very small student body, and their finances are poor.

Equipment

A questionnaire to the 'Principals of Colleges of Physical Education' reveals that the worth of furniture is 2—3 times more than the worth of gymnastic and sports equipment. A couple of institutions have mentioned "weight lifting set" as the unusual or special equipment they have. On an average, an institution possesses gymnastic and sports equipment worth Rs. 4,000, furniture worth Rs. 8,000 and medical equipment worth Rs. 200.

Special Problems

Institutions offering certificate course only have the problem of attracting students since the N. D. S. deprives job opportunities to their trainees and poor scale of pay for the trained student. With the integration of Physical Education, N.D.S., N.C.C. and A.C.C. into N.F.C. programme, the situation will improve. With the introduction of N.F.C. programme in the school system, a trained N.F.C. instructor will receive emoluments on a par with his colleagues in the other departments of the school. This will attract youths to this profession and the enrolment in institutions will improve.

It may, however, be noted that physical education needs a variety of facilities and a number of specialists in various programmes. Hence the need for consolidating an uneconomic, inefficient, small institution into a larger institution is very urgent.

R. N. Mago

INTRODUCTION

Guidance and counselling is an area in education which is comparatively new to this country. Guidance is developing slowly but steadily with the overall acceptance of the educational philosophy based on the needs of the individual. The function of school is also rapidly changing from formalized instruction to serving the needs of the individuals. In India, guidance programmes are gradually being accepted as an integral part of the function of the school for assisting the students to evaluate for themselves their own strengths and weaknesses and to realize their potentials for the good of self and of the community at large.

Super mentions : "The merging of these several streams (referring to vocational guidance, testing, psychotherapy) of development means that the movement started as vocational guidance now includes the psychotherapeutic approach".... "While it includes vocational guidance, it goes beyond it to deal with the person as a person, attempting to help him with all types of life adjustments."¹ Guidance in Indian educational scene is at the stage where this merging is beginning to take place. Vocational guidance and some of the essential psychological services are developing alongside each other. Now these services are expanding to the extent of helping students with life adjustments.

"The effectiveness of the work in any professional field is determined by many factors. None, however, make a greater impact than the selection and preparation of operational personnel. This is a matter of concern in any field where special preparation of personnel is required, but is of particular concern in guidance and student personnel work."²

The importance of training of guidance personnel was realized in India after the publication of the Secondary Education Commission's Report in 1952-53. The necessity for an adequately prepared guidance worker was felt by the Ministry of Education which established in October, 1954, a Central Bureau of Educational and Vocational

1. Super : Transition from Vocational Guidance to Counselling Psychology, *Journal of Counselling Psychology*. Vol. II, Spring, 1955.

2. P.M.C. Minn, et. al. "Status of Preparation Programmes for Guidance and Student Personnel Workers." *Bulletin*, 1959. No. 7. Washington, D. C. Department of Health, Education and Welfare, P. 1.

Guidance in Delhi. This was, in fact, the first step towards the initiation, development and coordination of the guidance movement in India.

Though the need for and importance of training of guidance worker was realized, yet its recognition in practice has not yet been achieved fully. There is still going on a long fight to establish the proposition that guidance personnel competence requires professional training. Almost every textbook on guidance invariably emphasizes the importance of the selection and training of student personnel workers.

The preparation of guidance workers requires a comprehensive understanding of the dynamics of guidance and counselling. However, it is quite difficult to draw a precise design for the preparation of guidance personnel. The traditional approach has had emphasized on methods, materials and techniques. From the review of literature on guidance, it is quite evident that we have in fact passed the stage where the preparation of guidance workers was based primarily upon techniques. "The myriad problems confronting the counsellor have forced a fundamental shift in counsellor preparation to include in it a foundation of basic theory and research in the social and behavioral sciences. The facilitation and direction of the counsellor preparation programme calls for an interdisciplinary approach in which the contributions of the behavioral and social sciences are brought to bear."¹ Since guidance and counselling is a profession, which attempts to assist and support its practitioners as much as possible in their day-to-day activities, one major effort in this regard is the establishment and maintenance of quality training programmes through which the knowledge and skills necessary for practice may be transmitted to the prospective guidance workers.

The essential feature of any training programme is to develop greater competence in the counselling and guidance staff, so that they may better apply existing knowledge and practices. The guidance worker thus must be professionally educated and not merely "trained". Like the physician and any other educated professional worker, he must learn specialized procedures and be responsible for their application in the light of a broad knowledge of his field.

Since the introduction of guidance in our schools, a great paucity of adequately trained guidance workers has been felt. In addition, the training programmes for them in many cases were limited to one week or to a three months period during which the emphasis was much on short-cut usages of guidance tools and techniques with little orien-

1. Z. R. Franklin, et. al. *Organization and Administration of Guidance Services*. Chicago, Rand McNally & Co. 1962.

tation to the guidance philosophy. Now, however, we are moving towards a stage where the emphasis will and should be placed on the highest possible quality of training. This no doubt takes time but the time will be well worth spending.

The main purpose of this paper is to report the present status of guidance training programmes in India rather than to assess the effectiveness of their respective programmes.

Types of Guidance Institutions

Guidance institutions are of various types. In the first place, there are guidance bureaux conducted by government and private agencies. Some of the universities also offer guidance courses at B.Ed. and M.Ed. level. The Extension Services' Department also organize short-term courses. The relevant information is given in the following table :

TABLE 33

TYPES OF INSTITUTIONS CONDUCTING SOME KIND OF GUIDANCE TRAINING PROGRAMME

State	No. of Guidance Bureaus		No. of Universities offering a course in guidance		Extension Services conducting orientation course in guidance
	Government	Private	B. Ed.	M. Ed.	
Andhra Pradesh	1	...	3	1	1
Assam	1	1	...	1	...
Bihar	1	...	1	...	1
Gujarat	1	4	3	3	4
Jammu and Kashmir	...	...	1	...	...
Kerala	1	1	1	1	1
Madhya Pradesh	1	...	3	4	2
Madras	...	...	...	...	1
Maharashtra	1	3	2	...	5
Mysore	1	1	...	1	3
Orissa	1	...	1	...	1
Punjab and Himachal	2	1	1	3	5
Rajasthan	1	...	3	2	2
Uttar Pradesh	1	3	4	6	6
West Bengal	1	1	3	1	3
Union Territories	4	...	...	2	1
Total	18	15	26	25	36

The facts reported herein were collected through a questionnaire sent to various agencies and institutions which organise some type of guidance training programme. The information recorded herein is limited to the extent that only 60 per cent of the guidance bureaux and 33 per cent of other institutions having some training programme for the guidance workers responded to the questionnaire. Some of these, however, did not report adequately. The Table 33 reveals that there are seventeen government bureaux of guidance in addition to the Central Bureau of Educational and Vocational Guidance, of The National Council of Educational Research and Training. Besides these, fifteen private bureaux of guidance are also existing in various Indian States. The number of universities offering a paper in guidance at B.Ed. level is twenty-six and at M.Ed. level the number is twenty-five. In addition to the Bureaus of Guidance and the universities, thirty-six Extension Services Departments of the teachers training institutions have been conducting orientation courses in guidance.

The existing training programmes also differ considerably with regard to their duration, content and emphasis. Numerous reasons could be assigned for such diversification of training programmes. Some of the important reasons usually thought of are : (1) the nomenclature has not been standardized to the point where designation of guidance personnel at various levels carry the same meaning for all concerned ; (2) the opinions of those responsible for conducting training programmes regarding what disciplines to include, are different, and (3) large variations about the functions and roles of guidance personnel at various levels have not been defined.

Guidance Personnel

A variety of terminology for guidance personnel is prevalent in the country. The different titles being used for parallel positions are counsellor, school-counsellor, teacher-counsellor, career-master and guidance psychologist. The guidance workers who have undergone training of same duration and are performing similar functions are known by different nomenclature in different States of India. For example, a full-time guidance worker in a high or higher secondary school is known as the guidance psychologist in Uttar Pradesh, career master in Madhya Pradesh, school counsellor in Maharashtra and Bihar, and counsellor in Delhi.

Nature of Training Programmes

Till recently three levels of guidance personnel are known, these are counsellors, teacher-counsellors and career-masters. As regards their training programmes, these may be reduced to two levels: (i) counsellor (full-time guidance workers) and (ii) teacher counsellor or career-masters (part-time guidance workers).

The training programmes for the full-time guidance workers, *i.e.*, counsellors exist in five states. In Delhi, it is offered by the N.C.E.R.T., and in Bombay, U. P. and Bihar this programme is organized by the State Bureaus of Guidance. A similar training programme is also being conducted by Panjab and Baroda universities. The State Bureau of Andhra Pradesh also ran a ten months' course in 1960-61 but was unable to do so in the following year due to other demands of the staff.

The short-term training courses are generally conducted for the career-masters or others as part-time guidance workers. These short term courses are usually conducted by either the State bureaus of guidance or by the Extension Services Departments of the teachers training institutions and in some cases by both.

The orientation courses have been organized for teachers and headmasters or principals with absolutely different objectives. Whereas, in most cases the orientation courses were provided for the headmasters with the sole purpose of informing them of their guidance roles as administrators, the orientation courses for the teachers were meant to orient them with their roles as teachers and part-time guidance workers.

These courses were of short duration ranging from one week to three months. These short-term orientation courses were specifically designed for the teachers and headmasters of the secondary schools with the purpose of introducing them to some of the problems and concepts of guidance and to help them to see the importance and complexity of guidance tasks. The emphasis was on creating and promoting guidance consciousness among the teachers and headmasters.

Besides the guidance bureaus and the Extension Services Departments of the teachers' training institutions, a number of universities provide pre-training preparation in guidance by way of having a paper on guidance in their syllabus for B.A. (Psychology) and/or for M.A. (Psychology). Karnatak University offers a full optional paper in B.A. (Psy.) Full optional paper at M.A. (Psy.) level is also being offered at eight universities, *viz.*, Patna, Delhi, Aligarh, Mysore, Jabalpur, Lucknow, Kerala and Sri Venkateshwara University at Tirupati in Andhra Pradesh.

Despite the variations in the syllabi for this paper from university to university, it has made some contribution towards the pre-training preparation for those who might wish to take up further professional training in the field at a later stage.

Courses of Studies

As stated earlier, two kinds of training programmes are being conducted by various institutions in India, one is for the full-time guidance worker and other for part-time persons. The full-time

guidance worker is usually imparted intensive training both theoretical as well as practical so that he can develop necessary skills in implementing guidance and counselling services in the school. For the part-time guidance workers training programme, a few lectures on the theoretical aspects of vocational guidance are given but the major emphasis is placed on occupational information and on the techniques of collecting and disseminating such information to the students. The real difference in these programmes, in fact, lies in seeing the importance and complexity of guidance tasks performed by counsellors and career masters.

The subject matter included in these two courses differs in content as well as in depth. Table 34 and Table 35 show the relative differences in the course programmes for the full-time and for the part-time guidance workers in India.

TABLE 34
LISTING OF STUDY COURSES FOR FULL-TIME GUIDANCE WORKERS
TAUGHT AT VARIOUS INSTITUTIONS

Course	Percentage of Institutions offering these courses	
	Bureaus of Guidance	Training Institutions
	50 per cent	55 per cent
(a) Principles and Procedures of Guidance	42 "	40 "
(b) *Principles and Techniques of Counselling	33 "	20 "
(c) Theory of Vocational Development	17 "	12 "
(d) **Psychology of Occupations	25 "	44 "
(e) Group Guidance	33 "	16 "
(f) Psychology of Adjustment	50 "	44 "
(g) ***Measurement and Evaluation in Guidance		
(h) ***Methods of Gathering and Interpreting Pupil Information	25 "	32 "
(i) Organisation and Administration of Guidance Services	25 "	40 "
(j) Occupational Information	58 "	40 "
(k) Basic Statistics for Guidance Personnel	42 "	32 "
(l) Supervised Practice :		
(i) Practicum in Testing	33 "	36 "
(ii) Practicum in Group Guidance	42 "	8 "
(iii) Practicum in Counselling	25 "	20 "
(iv) Any other	...	...

NOTE: Starred courses often overlap.

TABLE 35

COURSES OF STUDIES FOR PART-TIME GUIDANCE WORKERS

Courses	Percentage of Institutions offering these courses
(a) Occupational Information	100 per cent
(b) Principles and Procedures of Guidance	100 „
(c) Practicum in Group Guidance	75 „

One institution also indicated that it offers two additional courses *viz.*, Systems of Education and Development of Psychology. Guidance paper that is offered at B.Ed., M.Ed., B.A. (Psy.) or at M.A. (Psychology) level is so packaged that it simply touches almost every aspect of guidance and counselling. However, it is nothing more than having a glimpse of this professional area.

Institutions which may plan to impart comprehensive training to their guidance workers, may consider the revised syllabus for training the guidance personnel designed by the "All-India Workshop on Centrally Sponsored Scheme for Guidance" held at Bangalore in May, 1962 as an acceptable course outline to start with. This syllabus is available from the Central Bureau of Educational and Vocational Guidance, Department of Psychological Foundations, NCERT, Delhi. Besides this, the Central Bureau has also developed a comprehensive syllabus for the training of Career Masters, which can also be obtained by the interested institutions without any obligation. Both of these courses can be modified as per the needs of the institution and/or of the state concerned.

This writer is of the opinion that since the counsellor is to work primarily in a school situation, he needs to know a good deal of school offerings in the school curriculum. A paper on the school curriculum for those who are fresh and have had no teachers' training seems to be most desirable requirement in the specialized training of the counsellors.

Selection Procedures

The selection of guidance worker is the most crucial point in the process of organizing a guidance programme. It is generally agreed that, whatever the time a guidance worker puts in the field of guidance, whether part-time or full-time, he should have the same desirable personality traits.

As all of us know that the guidance worker has to perform a bewildering variety of roles, one has to conduct a number of relationships and responsibilities which call for a diversity of skills, understanding, interest, and attitude, to select a person for such an involved position seems a difficult problem.

Generally speaking, the counsellor-educators need to attract capable persons, prepare them well and keep them in guidance for a career job. They must try to select from many applicants those persons who will benefit the most personally and at the same time develop the skills, attitudes and understanding that will make them of maximum social value.

A good number of training institutions for the guidance workers do have certain acceptable standards for the selection. These standards include psychological tests, interviews and the evaluation of academic/professional progress and in some cases references from the professional persons are also called for. During the interviews, some institutions look for a person who seems well-adjusted emotionally over and above his other healthy personality traits.

Sometimes the institutions get deputed candidates from various States and institutions. These deputed candidates, in most cases, are exempted from the formal selection procedures laid down by the training institutions for the purpose and in so doing they get candidates with varieties of different motivations and interests. Though these persons fulfil the minimum requirements yet, some of them do not have those desirable qualities which are usually attributed to a guidance worker.

Teaching Staff

The information regarding the teaching staff/technical staff primarily engaged in teaching of courses in guidance at various institutions was not given by many responding institutions. Hence it seems rather difficult to mention the number of these personnel working either on full-time or part-time basis. It was, however, observed that of those who are responsible for teaching of guidance courses, some of them had either little or no training in guidance. In most cases, these personnel had a course in guidance at M.Ed. or M.A. level. It seems necessary to emphasize here that the counsellor-educators in any institution should themselves have proper qualification in guidance and relevant work experience.

A number of institutions indicated that they usually get resource personnel for conducting guidance courses from agencies such as the Central Bureau of Educational and Vocational Guidance, State Bureau of Guidance, Teachers' Training Institutions, Employment

Exchanges, and District Psychological Services. Some of these institutions also get Fullbright professors for some period.

Evaluation Procedures

The evaluation procedures adopted by various guidance bureaus for the assessment of the work of guidance workers in training varied from one institution to other. The evaluation of the teachers training institutions comprise both of internal and external examinations.

The percentage of guidance bureaus which have exclusively external examination is 30, those having exclusively internal examination is 20 and those having combination of both external and internal examination is 50. The weightage for theory and practical examinations is by and large fixed at 60 per cent and 40 per cent respectively. This distribution seems quite an acceptable one.

When asked if their guidance training programme equipped a beginning counsellor/career-master/teacher counsellor to take up the guidance responsibilities confidently and effectively, fifty per cent of the responding institutions stated 'yes', 25 per cent stated 'no' and the remaining were not sure of it. However, institutions indicating 'no' felt need for more time and weightage for practicum in counselling and more emphasis on practical training for the guidance workers.

Management and Finances

The Central Bureau of Educational and Vocational Guidance and the other seventeen government Bureaus of Guidance are being financed directly by the government. Out of the fifteen private bureaus of guidance functioning in various States, very few of them get State or Central help.

About seventy-five per cent of the responding institutions state that they get consistent administrative support from their authorities.

Ten per cent of the institutions also indicated that they help their trainees in their placement by way of recommending them to schools asking for such help by contacting the employers, by forwarding details of their trainees' academic and professional qualifications to the State D.P.I.'s and to the Employment Exchanges.

Finance

One major problem related to the development of adequate training programme for the guidance workers is that of finance. Almost all the State Bureaus reported insufficient finances. The other institutions, however, did not report whether or not they had separate a budget for guidance and whether it was sufficient one.

Special Facilities

A need for enhanced budget was indicated by the institutions especially for items such as staff, equipment and material for guidance laboratory and for professional books and periodicals.

Two State Bureaus reported that they have separate counselling rooms fitted with one-way mirror. About 75 per cent of other guidance bureaus stated that they do have separate counselling rooms but these are not fitted with one-way mirror. It is the opinion of this writer that the counsellor educator staff is committed to informing students of their chances of success as counsellors at the end of nine months' training and the counsellor trainee's success depends on what experience one has had in counselling practice. Unless the counsellor educator staff has observed all interviews of their counsellor-trainees through one-way mirror, the counsellor trainee's competencies in establishing a counselling relationship can hardly be judged. Many counsellor trainees get through the didactic courses and prove unsuccessful in conducting actual counselling with the students. There seems to be, therefore, a great need of having a fully equipped counselling room in every guidance bureau to give maximum benefit of training to the counsellor-trainees in this direction. Teachers' training institutions teaching a course in guidance also reported insufficient guidance material.

It is, however, suggested that those responsible for sanctioning finances for the guidance institutions should set up adequate standards for initial and recurring grants to them. The guidance institutions may be given freedom of use of finances and be not restricted to specific details. The standards of financial aid may, however, be based on due consideration of the work undertaken by and the future plans of the guidance institutions and should invariably include government and non-government agencies.

In-Service/Orientation Programmes

The in-service and/or orientation programmes are usually conducted for teachers and headmasters by the State Guidance Bureaus and by the Extension Services' Departments of Teachers Training Institutions. Through such courses, they are induced to see their roles as co-workers with the counsellors. They get an opportunity to realize that guidance is not specifically reserved for those who are in deep trouble, who are failing, and who are about to be transferred to some other training experience or seek employment. They also get to know that guidance procedures are not primarily designed for the treatment of emergency cases.

Data received earlier in a somewhat similar study revealed that up to April 1964, thirty-three short-term in-service training courses

in guidance for career masters were organized by Extension Services Departments. An up-to-date information in this respect could not be made available by the Extension Departments. However, a few of the responding institutions have mentioned the types of orientation/in-service training programmes conducted by them. These are as follows :

1. Collection and dissemination of information,
2. Pupil records,
3. Career exhibitions, career conferences,
4. Organization of guidance services in schools,
5. Guidance and curriculum,
6. Selection of courses by students,
7. Plant visits,
8. Talks on employment opportunities in various fields,
9. Administration of tests, and
10. Techniques of group guidance.

Survey of Specific Problems

A question concerning the kinds of problems/difficulties felt by institutions during the past few years in conducting their respective training/orientation programme for the guidance personnel was asked. Approximately two-thirds of the responding institutions mentioned a great variety of problems. These are summarized below :

1. Since the scope for employment in the guidance field is not much, to get right type of persons is a problem ;
2. Guidance is not a uniformly accepted policy in the total educational set-up.
3. Lack of adequate financial provisions.
4. Lack of experienced and suitable professional persons in the field.
5. Lack of interest in guidance among the educational authorities as well as in the managing boards of schools.
6. Lack of equipment, furniture, building.

7. Non-availability of practising schools.
8. Lack of placement facilities for the staff trained in guidance work.
9. Lack of psychological tests with Indian norms.
10. The training programme should be provided to a large number of teachers over a longer period and adequate arrangement for inspection of the work done by career-masters in their respective schools may be made.
11. Without starting 'guidance units' in schools and colleges, training programmes for counsellors, career-masters or teacher counsellors have no meaning.
12. The syllabus for the various types of guidance personnel needs modifications.

Summary

The field of guidance and counselling, as stated earlier, is still in its infancy here. It was at the recommendations of Mudaliar Commission that the Ministry of Education instituted a Central Bureau of Educational and Vocational Guidance to do some pioneering work in this area which might be useful in the process of helping the students as well as to the Indian education. Slowly but steadily the different Indian States started their State Bureaus of Guidance. Many private guidance bureaux did wonderful pioneering tasks in this field.

As is evident, it is difficult to obtain properly qualified personnel in any newly-started field, and this was also true in respect of guidance and counselling. However, with the gradual establishment of this new field, suitable training standards will soon be established. Hence all possible efforts for employing qualified candidates should be made.

It has been observed that approximately twenty per cent of the State Bureau staff members do not possess professional qualifications in guidance and many others possess very limited training and experience in guidance. The position of the teachers' training college staff engaged for teaching of guidance paper is rather discouraging. Most of them have not acquired professional training in the field of guidance. They are either M.A.'s in Psychology or M.Ed. with an optional paper in guidance.

The training programmes for the various types of guidance workers are not properly rounded out. The training of the full-time guidance workers should include a study of societal forces and cultural changes and supervised training in counselling and planned group

discussions besides other courses in guidance and counselling. If the field of guidance and counselling is to play an important role in education, the training of guidance personnel should be very comprehensive and not be confined merely to the smattering of some of the measurement, guidance and counselling theories. Of the total learning programme, not less than one-fourth should be devoted to supervised training in individual and group guidance or group counselling.

The course outline developed by the CBEVG for the career-masters training can be followed by the agencies engaged in the training of these personnel. However, the emphasis should always be on the enrichment of this programme.

A reference to the evaluation of training programmes is needed to be given here. All training institutions for the guidance workers should develop an evaluative criteria for their respective programme and should plan on the improvement of that. Unless proper evaluation is done, no programme of training can be effective. Some of the questions that might be considered for evaluating the training programmes are :

1. Have the trainees developed a guidance point of view ?
2. Have the trainees learnt about the student appraisal techniques and their effective use ?
3. Have the trainees learnt to handle problems of pupil adjustment during the nine months of graduate study ?
4. Should graduate training in guidance and counselling include familiarity with various curricula ?

The guidance movement in India will receive a big boost if the Bureaus of Guidance as well as the Extension Services Departments of teachers' training institutions will conduct more in-service and orientation courses in guidance for the teachers and headmasters.

As indicated earlier, most of the guidance bureaux are not fully equipped to conduct diploma courses in guidance. A few of them, however, are in position to impart necessary training to full-time guidance workers and they should continue, to do so. For others, it would be economically undesirable to undertake this task of training. Short-term courses in guidance may, however, be conducted by them.

Besides, each training institution in this case, State Bureau of Guidance, Central Bureau of Educational and Vocational Guidance, private Bureau of Guidance and the Teachers' Training Institutions should arrange to establish a guidance programme in a practice school

under their complete administrative and academic control. This will give their trainees on-the-spot experience of practising guidance and counselling effectively.

The guidance movement in India has a promising future provided this scheme is properly handled by professionally trained persons and provided it receives fullest possible administrative co-operation. However, the main responsibility comes over the counsellor-educators etc., who are primarily charged with selection and training of the guidance workers. They need to assess their programmes in order to provide well-rounded guidance experiences to their guidance workers in training.

19 A TEACHER TRAINING PROGRAMME FOR THE TEACHERS OF ENGLISH

V.K. Gokak

In the nineteen-fifties, the Government of India viewed with concern the falling standards of English in the country at various levels of education. This concern was also shared by a large number of educationists. Some of the reasons that led to this deterioration were: the curtailment of the time given in schools to the teaching of English; the poor quality of teachers; defective methods of teaching; and the inability to develop and implement a new approach and a new definition of objectives suited to the changed situation.

The Central Institute of English was established by the Government of India, in cooperation with the Ford Foundation and the British Council, to improve the teaching of English both through the organisation of research into the teaching of English, and training of teachers in suitable techniques of teaching English as a Second Language.

A society called the 'Central Institute of English, Hyderabad Society' was registered on 14th July, 1958. The affairs of the Society are managed by its Board of Governors, of which Dr. P.E. Dustoor has been Chairman since 1962. Dr. N.K. Sidhanta was the first Chairman of the Board.

The Institute started functioning in November, 1958. At the beginning, the Institute conducted two courses of study a year, each of four months' duration, starting in July and November. About sixty trainees were admitted to each course. They were selected from among teachers recommended by State Departments of Education, universities and principals of training colleges. In 1962, the Institute began a nine-month course for teachers of English in Arts and Science Colleges, Training Colleges, and Higher Secondary Schools, in addition to the four-month course. Teachers on this course were given intensive training in modern techniques of language teaching as adapted to conditions in India. They were trained to be key personnel and were expected to be able to organise courses of study for their colleagues in schools and colleges. The plan was to train a large number of teachers of English in the shortest possible time. An examination was held at the end of the nine-month course and a diploma awarded to successful candidates. So far, the Institute has trained 953 teachers. Their distribution is as follows:

167 lecturers from Training Colleges,

- 11 teachers from Training Schools,
- 395 lecturers from Arts and Science Colleges,
- 283 teachers from High and Higher Secondary Schools,
- 23 inspectors from Education Departments,
- 11 teachers from Army and Navy Schools,
- 53 lecturers from Engineering Colleges, and
- 8 non-stipendiary trainees.

Instruction is given to trainees at the Institute in the following subjects:

1. English Grammar,
2. Linguistics,
3. Spoken English,
4. Methods of Language Teaching, and
5. Literary Interpretation and Written English.

The course consists of lectures in these subjects, tutorials, written assignments, demonstration and practice teaching, group-work for research and training in specific projects, and practical training in the use of audio-visual aids. It might be said that a teacher either knows how to teach or that he doesn't know how to teach, and that a training programme is not going to alter the situation. But it is an undisputed fact that a training programme can make a good teacher better and prevent a bad teacher from getting worse.

Besides these regular courses of study at the Institute, short-term summer courses are organised for teachers who may not be able to attend the regular course. Particular mention should be made of the two seminars organised in Srinagar during May and June, 1961. The first seminar was attended by Directors of Education and Chairmen of Boards of Secondary Education. Efforts were made to acquaint these educational administrators with the current position of English Language Teaching at the elementary and secondary levels, and the reforms needed to improve the teaching of English.

The second seminar was attended by Professors of English and Chairmen of the Boards of Studies in English. As may be expected, there was a heated debate on the questions raised by the Institute. But there was general agreement on rapidly falling standards, and the seminar was able to produce a statement on the minimum objectives and requirements in English at the PUC level. This statement may well be used as a basis for reform both in the methods of teaching and examinations. Indeed, it has already been so used in some areas.

A six-week course on the teaching of English was held in the summer of 1962 in Mysore. The group consisted of lecturers in English Methods from Training Colleges and Inspectors of Education. The Summer Course held in May 1964, was meant for university professors of English and senior lecturers in English in university departments. The course aimed at explaining the need for language teaching in university departments of English and suggesting methods by which efficient language teaching could be secured through a proper adjustment of syllabuses at the university level. The Summer Course of 1965 was planned for English lecturers in Engineering Colleges.

A conference of all the Directors and Directors of Studies of State and Regional Institutes of English was organised in February, 1965. There were nine such institutes in existence at the time. This conference will now be an annual feature and it is expected to help the CIE in co-ordinating activities in this field all over the country.

An Extension Unit of the Institute was set up in June, 1964. The Unit prepared syllabuses, time-tables, etc., for short courses at different places in India. Its main duties are to organise short in-service training for English teachers in different parts of the country, and to contact ex-trainees and keep them posted with the latest work done at the Institute. During the year the Unit has visited Ajmer, Vallabh Vidyanagar, Ahmedabad, Kolhapur and Ponna and participated in the running of short courses for PUC teachers of English.

Two series of radio lessons were broadcast by the Institute during the last two years, in consultation with the All-India Radio and the Directorate of Public Instruction, Andhra Pradesh, Hyderabad. These dealt with comprehension, intonation and the stress patterns of English, and were based on the prescribed texts. They have been welcomed by teachers and students from all over Andhra Pradesh. This year the Institute planned a series of broadcasts for SSLC students, and the Andhra Pradesh Directorate of Education included these lessons in the regular time-table of all the schools in the State. Radio broadcasts, of course, are no substitutes for teachers and class-room teaching. A teacher sees and hears, and is also seen and heard by his pupils. A radio teacher is only heard, not seen. And he neither sees nor hears his pupils. But suitably used radio lessons are a valuable supplement to class-room instruction.

The Institute has a well-equipped audio-visual section. A number of talks on the teaching of English, and pronunciation drills have been prepared and taped. They are recorded free of charge for any institution which sends the necessary tapes. There is considerable demand for these taped materials.

The Institute publishes a Bulletin every year, which contains contributions by members of the teaching staff and participants on various aspects of the teaching of English. Three issues of the Bulletin, and two monographs have so far been published by the Institute. One of the monographs is on a Verb-Form Frequency Count, and the other goes into the implications of the Frequency Count. Both the monographs have been well received.

Two course books prepared by the Institute were published under the title *A Preparatory General English Course for Colleges*, one for students of Physical Sciences, the other for students of Social Sciences. There is an abrupt change from the regional medium to English in most pre-university classes and many students are ill-equipped to follow the courses taught in English. The Institute, therefore, undertook a count of the additional vocabulary that pre-university students would encounter in their prescribed texts on social or physical sciences, and devised a course in English that would help them to acquire these words so that their university education might be maximally useful to them. These have been widely used for remedial work and for regular instruction in some areas.

A Production Unit was set up in December, 1963 for the preparation of text-materials for use in schools. It is proposed to prepare by March, 1966 a series of course books, teachers' handbooks, and workbooks in English meant for use from Standard III to Standard XI, and another from Standard VI to Standard XI.

Apart from specimen syllabuses for almost all levels of English teaching that the Institute had drawn up and published, I should like to refer to two other projects which have special significance. One is Contrastive Studies in English vis-a-vis modern Indian Languages that have now been taken up at the Institute. Research fellows have started work on this project under the guidance of an American linguist, Mr. C.P. Masica. These studies will enable us to produce text-materials oriented to the special needs of pupils learning English in each linguistic region in the country.

The Institute has undertaken the project of defining a standard of spoken English for educated Indians. British Received Pronunciation is too high a goal for all students of English as a second language in India, from the practicable point of view. At the same time, the teaching of pronunciation cannot be neglected, for there is the danger of spoken English splitting into fourteen different dialects, if there is no attempt made at uniformity. An acceptable and intelligible standard of spoken English, which eliminates regional distortions, selects vowels and consonants that are essential to intelligibility, and takes into account word-stress and some aspects of intonation, has to be defined so that it can be taught in our schools. Our research fellows have already collected numerous specimens

of the Spoken English of educated Indians engaged in different spheres of work from various parts of India. We expect that an analysis of these specimens will help to define an acceptable and practicable standard of Spoken English which can be taught in all our schools.

The Institute gives financial assistance to State and Regional Institutes of English and to training colleges, out of the funds placed at its disposal for the purpose by the Government of India. The assistance is meant for:

- (a) the creation of teaching posts in Institutes of English;
- (b) research projects aimed at raising the standard of English;
- (c) the preparation of teaching materials, audio-visual aids, etc.;
- (d) acquiring books on the teaching of English.

Several ex-trainees of the Institute are doing very useful work in various parts of India. Some of them have been appointed as lecturers or professors in State and Regional Institutes of English. Most of them are in demand for running refresher courses for English teachers in various regions. A few have contributed articles to learned journals and have also published books on the teaching of English. The Institute frequently receives encouraging letters about the work that its ex-trainees are doing in this field. The CIE presents an educational kit to its ex-trainees, and also keeps them in touch with the work done at the Institute through periodic newsletters.

The Diploma awarded by the Institute at the end of a nine-month course is winning wide recognition. The UPSC considers this Diploma as a necessary qualification for some teaching posts. The following universities have recognised the Diploma as a desirable additional qualification for their lecturers in English:

1. Andhra University,
Waltair.
2. Banaras Hindu University,
Varanasi-5.
3. Bombay University,
Bombay.
4. Karnatak University,
Dharwar, Mysore State.

5. Kerala University,
Trivandrum.
6. Maharaja Sayaji Rao University,
Baroda.
7. Marathwada University,
Aurangabad, Maharashtra.
8. Osmania University,
Hyderabad.
9. Sardar Vallabhbhai Vidyapeeth,
Vallabh Vidyanagar, Gujarat.
10. Shrimati Nathibai Damodar Thackersey
Womens' University, Bombay.
11. Sri Venkateshwara University,
Tirupati.
12. Utkal University,
Vani-Vihar, Bhubaneswar.

Quite a few universities have felt the impact of the Institute and tried to examine their syllabuses in the light of the views expressed by the Institute. This can be regarded as a good augury for the future.

The Boards of Secondary and Higher Secondary Education have also begun to feel the impact of the Institute. The Rajasthan Board reintroduced the Structural Approach in the teaching of English and got its texts scrutinised by the Institute staff. The texts prescribed by Gujarat, Madhya Pradesh, West Bengal and the State of Jammu and Kashmir were also scrutinised by the Institute. The Maharashtra Secondary Education Board revised its test procedures in the light of the views expressed by the Institute staff. Text-books were selected by the Institute for the Board of Secondary Education in Assam.

The Diploma course has attracted one or two students every year who joined the Institute at their own expense, without expecting any payment of stipends. The number of such non-stipendiary students is slowly but surely on the increase. The Institute looks forward to a time when non-stipendiary participants will entirely take the places of all stipendiary trainees.

The Institute had no buildings of its own when it began its work in 1958. It was housed in three buildings placed at its disposal by

Osmania University. Hostels for men and women students were situated at some distance from the main buildings. The trainees were taken to and from the Institute and the various hostels in a bus provided for the purpose; they had to spend almost as much time on their bus journey as on their lectures and tutorials. To obviate this difficulty, Osmania University most generously offered to make over to the Institute a site of thirty acres on the University campus (along Sithapalmandi Road), for the buildings of the CIE. This offer was gratefully accepted in 1960. An administrative block, two hostels (for 60 men and 15 women respectively), the Director's bungalow, four quarters for teaching staff, some tenements for Institute servants and a few garages were completed by the end of 1965. A few office rooms for the Production and Extension Units were also planned later. The estimated cost of the buildings was about 15 lakhs of rupees.

The regulations and syllabuses for the Diploma Course are reproduced below. They will serve to give an idea of the training imparted at the Institute.

REGULATIONS AND SYLLABUSES FOR THE DIPLOMA COURSE

I. Courses

There are five main courses. They are:

- (i) English Grammar.
- (ii) Linguistics.
- (iii) Literary Interpretation and Written English.
- (iv) Methods of Language Teaching.
- (v) Spoken English.

There are lectures in these subjects, tutorials, written assignments, demonstration and practice teaching, group work for research and training in specific projects, and practical training in the use of audio-visual aids. There are facilities for individual research under supervision, and the results of such research may be presented as course papers. There will be an examination at the end of the course. Successful candidates will be awarded the diploma of the Institute.

II. Syllabuses

ENGLISH GRAMMAR

Aims of the Course

1. To give participants a survey of the structures of modern English.

2. To emphasize those structures that may present difficulties to students of English in India.
3. To give participants practice in the identification and use of structures.
4. To suggest how structures can best be taught in schools and colleges.

Methods

In lectures, structures will be presented and discussed. In tutorials, participants will have practice in identifying and using structures. Periodic tests will be held. Participants will be expected to read about the topics covered in recommended books. In group-work, participants will be required to assist in a frequency-count of various structures.

For the purposes of lectures, structures have been arranged in three groups, as shown in the syllabus below. After introductory lectures, one lecture a week will be given on topics from each of the three groups.

Syllabus

Introductory

Sentence Structures

1. Sentence structures
2. Negation
3. Questions and replies
4. Commands and wishes
5. Exclamations. Elliptical and incomplete sentences
6. Compound sentences. Conjunctions.
7. Complex sentences. Adverbial, adjectival, and noun clauses
8. Reported speech.

Noun and Adjective Structures

9. Number and case of nouns
10. Adjectives used attributively with nouns.

11. Noun structures
12. Determiners
13. Adjectives used predicatively
14. Adjective structures
15. Pronouns
16. Prepositions

Verbs and Adverbs

17. Voice
18. Mood
19. Tense and aspect
20. Anomalous and impersonal verbs
21. Infinitives
22. Gerunds
23. Participles
24. Adverbs

A SELECT BIBLIOGRAPHY

A.S. Hornby: *A Guide to Patterns and Usage in English*.

R.W. Zandvoort: *A Handbook of English Grammar*.

G. Scheurweghs: *Present-day English Syntax*.

For Further Reference

1. Otto Jespersen: *A Modern English Grammar*. 7 volumes.
2. E. Kruisinga and P.A. Erades: *An English Grammar*. Vol. I, Parts 1 and 2.
3. Paul Roberts: *Patterns of English*.
4. -do- : *Understanding Grammar*.
5. -do- : *English Sentences*.
6. Barbara M.H. Strang : *Modern English Structure*.

LINGUISTICS

Aims of the Course

1. To acquaint participants with the modern science of linguistics, especially as it applies to language-teaching.
2. To give them a new perspective on language itself.
3. To enable them to make use of a variety of modern materials relating to the study and teaching of the English language.
4. To acquaint them with the techniques and results of contrastive research, and to encourage them to make contributions of their own to this field.

Syllabus**Units**

- I. General introduction: language and its study; implications and applications of linguistics; theories and methods.
- II. Practical phonetics: the organs of speech; classification of sounds; phonetic symbols.
- III. Phonemics: phonemic analysis; phonemic symbols; distributional restrictions on phonemes; stress, pitch, and juncture.
- IV. Contrastive phonology: assumptions and procedures; practical work.
- V. Grammatical analysis: [grammar *vs.* lexis; formal *vs.* notional criteria; classifying morphemes and words; unit, pattern, and system; syntactic analysis.
- VI. Morphemics: allomorphs and morphemes; morpho-phonemics.
- VII. Contrastive grammar: assumptions and procedures; category, form, and use; alignment of descriptions; comparison of selected structures; practical work.

[Sections A and B will be pursued concurrently in alternate lectures].

A SELECT BIBLIOGRAPHY

1. H.A. Gleason: *Introduction to Descriptive Linguistics*
2. C.C. Fries: *Teaching and Learning English as a Foreign Language*.

3. C.C. Fries: *Structure of English*.
4. Paul Roberts: *Patterns of English*.
5. J. Sledd: *Short Introduction to English Grammar*.
6. A.S. Hornby: *A Guide to Patterns and Usage in English*.
7. R. Lado: *Linguistics Across Cultures*.
8. W. Nelson Francis: *Structure of American English*.
9. Robert Hall: *Linguistics and Your Language*.
10. Barbara Strang: *Modern English Structure*.

LITERARY INTERPRETATION AND WRITTEN ENGLISH

I. The Aims of the Courses:

1. To give participants a clear idea of the process by which literature becomes a personal exercise of language.
2. To enable participants to grasp clearly the criteria of literary specimens from the point of view of text-material.
3. To discuss the problems involved in the teaching of English literature for the purposes of second language learning; and this from the earliest stage to the compulsory English stage in universities.
4. To formulate and demonstrate the need for new syllabuses and methods of teaching and testing, consequent on the adoption of a course in English literature as primarily a course in second language learning.
5. To illustrate standards of good written English and to improve the written English of participants.

II. The Methods Adopted Will be

1. To deliver lectures elucidating the topics connected with the courses ;
2. To discuss illustrative material relevant to the topics during tutorial periods ;
3. To organise group work on a topic related to the course ;
4. To arrange for lessons in which the employment of the methods advocated will be demonstrated ;
5. To get participants to write exercises in a given style.

III. The Course

- A. *The principles of criticism that assist in placing a given literary extract and in ascertaining its literary quality*
 1. Language and Literature.
 2. Literature as Language : the vocabulary of poetry.
 3. The syntax of poetry : syntax as part of poetic structure.
 4. The rhythm of verse and prose : the metres of English poetry.
 5. Poetic meaning : logical and imaginative.
 6. Form, style and imagery ; figures of thought and figures of speech ; symbolism.
 7. Mood and attitude in literature and the manner of ascertaining them in their variety and complexity. The importance of such an ascertainment for the purposes of imaginative comprehension. The artist's creative vision.
- B. *A comprehensive definition of literature for the purposes of second language learning*
 8. Prose : the varieties of prose style ; the aberrations of prose style ; registers in English prose.
 9. The Cambridge Conference and its comprehensive definition of literature.
 10. The teaching of English literature in India.
- C. *The linguistic situation in India in which English literature is used for second language learning*
 11. Bilingualism and its implications :
 - (a) English and Indian Renaissance.
 - (b) English as an official language and as a medium of higher learning.
 - (c) The trilingual situation in India and the proper age for second language learning.
 - (d) The problems of transfer to English medium in college.
 - (e) Aims and objectives.
 12. The study of English as a world language.

D. *Current practices in the use of literature for instructional purposes.*
Reforms suggested

13. The predicament of English literature in the Pre-University class.
14. A syllabus for Pre-University English literature.
15. A syllabus for compulsory English literature in universities.
16. The problem of text materials.

E. *Methods of teaching and evaluation*

17. Methods of teaching English literature in Pre-University and compulsory English classes.
18. Teaching English literature : logical and imaginative comprehension *versus* appreciation.
19. Evaluation techniques for a test paper on Pre-University English texts.
 - (a) PUC specimen test papers.
 - (b) Construction of examination questions on texts.
20. Evaluation techniques for B.A. compulsory English texts.

A SELECT BIBLIOGRAPHY

1. Brooks, C. and Warren R. P. : *Understanding Poetry*, New York Holt, Rinehart and Winsten, 1961.
2. Skelton, Robin : *The Poetic Pattern*, London, Routledge, 1957.
3. Gokak, V. K. : *The Poetic Approach to Language*, Oxford University Press.
4. Boulton, Marjorie : *The Anatomy of Prose*, London, Longmans, 1955.
5. Walton, T. : *An Advanced English Reader*, London, Longmans, 1955.
6. Gordon, D. S. : *The Teaching of English in Free India*, Madras. Christian Literature Society, 1960.
7. Holbrook, David : *English for Maturity*, Cambridge University Press, 1961.

8. Gokak, V. K. : *English in India*, Asia Publishing House, 1964.
9. *Indian Examinations Reform Project* : Report of the Committee, USIS.
10. *Problems in Education*, Papers published by the D. E. Society, Poona, 1960.
11. *Commonwealth Conference on the Teaching of English as a Second Language*, Uganda : Report of the—1964.
12. *The Teaching of English Literature Overseas*, edited by John Press, Methuen & Co., 1963.
13. Bloom, B. S. : *Evaluation in Higher Education*, UGC, New Delhi, 1961.
14. Bloom, B. S. : *Evaluation in Secondary Schools*, Ministry of Education, Government of India, 1957.
15. *Evaluation in Secondary Schools*, Directorate of Extension Programmes for Secondary Education, Ministry of Education, Government of India, New Delhi, 1962.
16. Gayen, A. K., *et al.* *Measurement of Achievement in English*, Indian Institute of Technology, Kharagpur (West Bengal).

METHODS OF LANGUAGE TEACHING

The aims of the course are :

1. to improve the participants' skill as teachers of English ;
2. to show the theoretical bases on which this skill is founded ;
3. to give advice to the participants on
 - (a) training teachers of English ;
 - (b) preparing materials for English language teaching ;
 - (c) planning syllabuses for courses in English.

The course in Methods consists of :

1. lectures, divided into four units ;
2. tutorials, also divided into four units ;
3. weekly period of demonstration and practice teaching in schools and colleges ;

4. two periods of 'block' demonstration and practice teaching ;
5. some general work on perfecting the participants' skills in English ;
6. a week's work in German (designed to give the participants some experience of the recommended approach in action).

During the second half of the course, there will be

7. lectures and demonstrations given by each participant in turn, this work is designed to be a preparation for teacher training duties.

The work is divided into the following four units: each unit is concluded with a short written test.

Unit 1

Conditions for good learning : systematic learning—listening and summarizing—note-taking.

The meaning of the term 'method' : the nature, range and methods of English language teaching in India today—the discipline of a course—the 'structural' approach—grading and area procedures in course design—the students'/pupils' contact with English.

The psychology of learning : what is learning?—how does learning take place?—memory and behaviour—retaining information and establishing skills—maintaining interest—incentives.

Activity and experience : the idea of a 'situational method'.

Skills in language : the functions of the various skills—precedence in the acquisition of those skills (psychological considerations—'speech first'—grammar and translation—psychologist's view : which pattern of behaviour is most easily influenced—learning through reading—activity and experience)—the demands made on English at the present time : how are these relevant to the discussion on precedence?—the advisability of teaching all four skills together : the 'multi-skill' approach.

Unit 2

The CIE syllabuses

Short course of in-service training for teachers of English

Establishing language skills :

Auding : levels of comprehension—training in efficient aural comprehension—the use of simplification techniques in inculcating oral-aural skills—contextualizing the foreign language being studied.

Reading : teaching the elementary skill—phonic, ‘look and say’, ‘sentence-methods’, and some others—teaching the more advanced skills : reading at speed, scanning—a case of frequent misunderstanding in reading English : the idea of causal relationship—good textual presentation—printing—spacing—the class library—the reference library—reference techniques—the ‘Initial Alphabet’ and some other contrived systems—testing reading comprehension—concepts of word-formation.

Unit 3

Establishing language skills.—(contd.)

Writing : patterns for beginners—a suitable script for learners—dictation exercises—controlled composition—picture composition—free composition—opportunities for creative writing.

Speaking : intensive oral drilling for beginners—oral-situational drilling—oral drilling for more advanced learners—substitution tables—speech games—songs and poems—reading aloud—acting in plays—tutorial groups for colleges—Indian styles of pronunciation.

Devices for establishment

Visual Aids : the blackboard (writing and drawing)—film strips and films—wall pictures—the Delhi TV programme in English for schools.

Oral/Aural Aids : conversation practice—the tape recorder—the CIE radio programmes for schools—language laboratories.

Unit 4

Textbooks and Workbooks : designing courses—lesson plans—preparing exercise materials—structure tables—the “teacher’s guide” to a textbook series—assessing the efficiency of a course.

Testing and Examining : some principles : validity, reliability—types of test—correcting written and oral performance in English—the conduct of remedial work.

A SELECT BIBLIOGRAPHY

I. Books available in sets of at least ten copies in the CIE library :

1. Billows, F. L. : *The Techniques of Language Teaching*.
The Bulletin of the CIE, Nos. 1, 2 and 3.

2. CIE : *A Preparatory General English Course for Colleges* ('PGE') 2 volumes, one for Social Science and other for Physical Sciences. (Page numbers in the schedule refer the volume to for Social Sciences, referred to as 'SS').
3. French, F. C. : *The Teaching of English Abroad*.
4. Fries, C. C. : *Teaching and Learning English as a Foreign Language*.
5. Frisby, A. W. : *Teaching English*.
6. Gatenby, E. V. : *English as a Foreign Language*.
7. Gauntlett, J. : *Teaching English as a Foreign Language*.
8. Gokak, V. K. : *English in India*.
9. Halliday, MAK, et. al. : *Linguistic Sciences and Language Teaching*.
10. Hill, L. A. : *Picture Composition*.
11. Hornby, A. S., etc. : *Advanced Learners' Dictionary*.
12. Lado, R. : *Linguistics Across Cultures*.
13. Palmer, H. : *The Principles of Language Study*.
14. Spencer, D. H. : *English for Proficiency*.
15. West, M. : *A General Service List*.
16. West, M. : *Learning to Read a Foreign Language* (new ed.).
17. West, M. : *Teaching English in Difficult Circumstances*.

II. Other books and journals :

1. *English Language Teaching* ('ELT').
2. *Language Learning*.
3. *Teaching English*.
4. Ramshaw, H. C. : *Blackboard Work*.
5. Scherer & Wertheimer : *A Psycho-linguistic Experiment in Foreign Language Learning*

SPOKEN ENGLISH

Aims of the Course

1. To establish in the minds of the participants the necessity for teaching pronunciation in India.
2. To give them an awareness of the problems involved.
3. To put them in a position where they can themselves improve their own pronunciation.
4. To enable them to pass on what they have learnt.

The Course

1. Introduction : phonetics and the second language teacher ; primacy of speech and its bearings on the teaching of a second language ; English pronunciation in India—a retrospect and a prospect.
2. Phonetic transcription—the E.P.D. system ; organs of speech ; classification of sounds—voiced and voiceless sounds ; vocoids and non-vocoids ; vowels and consonants ; English vowels and consonants ; the four phonological units—tone-group, foot, syllable and phonematic unit.
3. Word-stress in English—the importance of stress ; stress-patterns in words ; the pronunciation of unstressed vowels ; degree of stress ; where the stress falls—some rules ; functional stress-changes ; double stress ; stressing of compounds.
4. Sentence-stress : stress in groups of words ; the rhythmical principles ; which words should be stressed ; weak forms ; multi-stressed words and sentence stress ; pauses ; thought groups and blending.
5. Intonation : what intonation is ; the function of intonation ; basic tones ; the placement of the nucleus, neutral and contrastive ; emotional implications of the tones ; correlation between grammatical patterns and tone patterns.
6. The English vowels in detail.
7. The English consonants in detail.
8. Some standard forms of spoken English—RP, General American, Scottish, Australian, etc.
9. Educated Indian pronunciation—problems and some guiding principles.

10. Special difficulties of Hindi, Tamil, Telugu, Marathi, Kannada, Punjabi, Assamese, Malayalam and Bengali learners of English.
11. Techniques and procedures of teaching pronunciation; primary school, secondary school, undergraduate students; students specializing in English, adult learners; the conduct of short courses in spoken English.

Practical Work

1. Exercises in the pronunciation of English sounds.
2. Exercises in word-stress and sentence-stress.
3. Exercises in intonation.
4. Dictation for transcription of English words and sentences.
5. Dictation for transcription of meaningless words containing English sounds.
6. Written exercises in the description of sounds and how they are produced.
7. Exercises in the transcription of connected passages of Written English.
8. Exercises in preparing connected passages for reading aloud.
9. Nursery rhymes and verse reading.
10. Production of pronunciation drills for different language groups.
11. Free conversational practice.
12. Diagnostic test at the beginning of the course, and recording at the end of each term of a continuous passage read aloud by each participant.

A SELECT BIBLIOGRAPHY

1. Daniel Jones : *An Outline of English Phonetics*.
2. A. C. Gimson : *An Introduction to the Pronunciation of English*.
3. Daniel Jones : *English Pronouncing Dictionary*.
4. W. A. Allen : *Living English Speech*.

5. E. L. Tibbits : *Practice Material for English Sounds*.
6. L. A. Hill : *Drills and Tests in English Sounds*.
7. Geoffrey Bernard : *Better Spoken English*.
8. Roger Kingdom : *The Groundwork of English Stress*.
9. Daniel Jones : *Phonetic Readings in English*.
10. Roger Kingdon : *The Groundwork of English Intonation*.
11. W. R. Lee : *An English Intonation Reader*.
12. J. T. Pring : *Colloquial English Pronunciation*.
13. Peter Strevens : *Spoken Language*.
14. H. S. Wise : *Applied Phonetics*.

III. EXAMINATION

(i) *English Grammar*

There will be a written paper of 3 hours, which will test the candidate's ability to analyse the language structurally.

Marks—50.

(ii) *Linguistics*

There will be a written paper of 1½ hours.

Marks—25.

(iii) *Literary Interpretation and Written English*

There will be a written paper of 3 hours testing candidates in :

- (a) the analysis of the vocabulary and syntax of a given passage (prose and verse) ;
- (b) the analysis of the imagery, mood and attitude of a given passage (prose and verse) ;
- (c) the analysis of the rhythm of a given verse passage ;
- (d) determining the suitability of a given passage (verse or prose) to a particular stage of second language learning.
- (e) There will also be an exercise in Written English.

Marks—50.

(iv) *Methods of Language Teaching*

There will be one written paper of 3 hours, which will test candidates in their knowledge of the subject-matter

of the course, and in their ability to put this knowledge into action, *e.g.*, in the production of materials and lesson-plans.

In addition candidates will be expected to show a reasonable standard of competence in classroom teaching or lecturing, and to be able to use the prescribed audio-visual aids efficiently.

Marks—50.

(v) *Spoken English*

A. There will be a written paper of $2\frac{1}{2}$ hours comprising :

- (a) Transcription of a passage of written English into phonetic script ;
- (b) Questions—analysis and classification of speech sounds, English and other, their description and length, stress and intonation.

B. There will also be an oral examination comprising :

- (a) Reading from an unprepared text, phonetic and/or orthographic ;
- (b) Taking down a dictated passage of English in phonetic script ;
- (c) Dictation of meaningless words containing English sounds ;
- (d) Oral questions on phonetic theory and its practical applications.

C. The performance of trainees at tutorials will be assessed during the course of the year and weight will be given to this in the final assessment.

Marks—50.

Work During the Course

At the discretion of each department, with the exception of Methods Department, 10 per cent of the maximum marks allotted to each main subject may be set aside for an assessment of the candidate's general performance in that subject during the course. The group work undertaken by each participant will be assessed by his/her supervisor and taken into account when the examination results are determined.

In Methods Department, 10 per cent of the maximum marks for the examination will be set aside for the assessment of the candidate's efficiency as a teacher.

IV. THE POST-GRADUATE DIPLOMA

Successful candidates will be awarded the *Post-Graduate Diploma in the Teaching of English of the Central Institute of English, Hyderabad*. They will be divided into classes :

I, II₁, II₂, and III.

Results in individual subjects will be announced according to a scale of five grades :

A, B, C, D and E.

There are nearly ten Institutes of English functioning in India today, in addition to the Regional Institute of English established in Bangalore for the South Indian States. These Institutes are mainly concerned with teacher training programmes for elementary and secondary teachers.

Anil Vidyalankar

and

P. Lakshmi Kutty Amma

SECTION I

INTRODUCTION

Good training of language teachers, and especially of Hindi teachers, is the most important task in the educational reconstruction of our country. It is necessary for both the intellectual and the emotional development of our people. Indian languages are now coming into their own, and, with the background of millennia of thought and experience of a nation that has seen so many ups and downs, they are destined to play a very vital role in the future development of ideas both in this country and abroad.

So far we have been teaching Hindi only as one of the school subjects. We have now to view it as also the most effective instrument of social and cultural revolution, we are trying to bring about in our country. A common language of a nation is as essential a requirement for national unity and progress as a common constitution and common currency. In fact the sharing of common inheritance and traditions by the people is incompitible without their having a common language. Historically this task was done for us by Sanskrit. For the last one century English remained the all-India language for the educated. Yet both of these languages, one indigenous and the other foreign, never reached the masses. Part of the reason for this lies in the fact that it is only now that a national government in our country has at its disposal vast resources like paper, printing-machines, buildings and teachers to bring education to the masses. The acquisition of these powers, however, is not an unmixed blessing, and with the new opportunities our problems have also multiplied manifold. This requires all the more that the training of Hindi teachers take place on scientific lines so that they can carry efficiently the heavy responsibility lying on their shoulders.

*The entire chapter has been written in two sections. Section I by Sri Anil Vidyalankar who deals with the training programmes of Hindi teachers both for Hindi-speaking and non-Hindi-speaking areas. He also touches upon certain general problems in the field. Section II is by Smt. P. Lakshmi Kutty Amma, who deals specifically with the problems of preparing non-Hindi-speaking teachers for teaching Hindi in non-Hindi-speaking areas with special reference to Kerala.

Training institutions are a recent phenomenon in our ancient country, and, even though a great controversy is going on in the countries of their origin as to their role, they have become a part of our educational framework. The only thing we are now to concern ourselves with is how to make the best use of them.

Hindi in Training Colleges

Even a very casual glance at the programmes and the budget of any teacher-training institution would show that a substantially large part of it is spent on the training of the language teachers. Almost in every training college more than half of the practising teachers offer one of the languages as their teaching subjects. As Hindi is, besides English, the only subject being universally taught all over the country, it may be safely assumed that at least 25 per cent of the teacher-trainees in all the training institutions at any time in our country are learning to teach Hindi.

The immensity of the problem of the proper training of Hindi teachers can well be realized by the fact that Hindi is the third largest spoken language in the world. We have to muster all our resources and utilize them properly to fulfil the great need of proper teaching of this language. The task, as everybody knows, is beset with a number of academic and emotional difficulties. Yet, it is on the quality of Hindi teachers that the future destiny of this country depends. One cannot overemphasize this point. We have before us the example of another multi-lingual country, Russia, where a population smaller than our own speaks more languages than we do, yet that country has succeeded in building a strong national feeling through the universal and efficient teaching of Russian. That is what we have to accomplish through the teaching of Hindi in our country. We certainly need physicists, chemists, mathematicians and engineers of high quality. But these scholars simply prepare the tools for social development, they do not lay down the direction of it. The direction of the development of a society is decided by persons who think, not in a narrow, specialized field, but in a wider perspective that includes all personal and inter-personal aspects of human behaviour. The training imparted through language right from the beginning of a child's life is therefore of utmost importance here. In natural sciences, such as physics, it is not unusual to come across new theories that upset the old ones. Scientists usually do not have much difficulty in adjusting themselves to the new ideas. But if something is taught to be true through verbal language in the young years of a child, he may be hard put to it to change his views in his years of maturity. This explains why people find it difficult to change their religious or political beliefs with which they have grown. These spheres of knowledge (or ignorance) do not have any mathematical exactness about them. They just thrive on verbal delusions. Once a child's learns something wrong through language, he tends to hold it tenaciously throughout his life.

This shows why we should exercise utmost care in the training of language teachers and especially of Hindi teachers who would be responsible for the intellectual and emotional development of crores of Indian children.

Hindi as the Mother-Tongue and as a Second Language

About 45 per cent of Indians speak Hindi as their mother-tongue. To the rest of the people it has to be taught as a second language. Some wrong notion about the nature and place of Hindi has led some educationists to equate the teaching of Hindi as a second language with the teaching of English in that capacity. This is quite misleading. To take just one example, an optimistic teacher of English would hope to teach about 3,000 words of that language during a six or seven-year course.¹ On the other hand, a high school student living anywhere in India except Madras and who has never studied Hindi as a subject already knows thousands of Hindi words because of the common vocabulary in Indian languages. Thus the achievement in the teaching of Hindi as a second language should be much higher than what is realized in the teaching of English as a second language.

We cannot allow the question of standards in the Hindi teaching to drift endlessly. If the national language of people is not developing that simply means that the nation is not developing. We should try to see that after a five or six-year course in Hindi a non-Hindi child is able to use this language almost as his mother-tongue. That is the first condition for achieving a common intellectual life at the university level. With the standards in English fast deteriorating, we have to quicken the pace of the development of Hindi if we want to avoid the prospect of having an educational vacuum where our pupils are illiterate in two or three languages. Though the Education Commission has recommended that regional languages should be the medium of instruction even at the university level, this does not lessen the importance of accomplishments in Hindi. Sooner or later when the students and the staff will feel the need of migrating to other universities, and, with the gradual decline of English, Hindi would be the only language to help them in intellectual communication. Thus the first important point in our training programme for Hindi teachers would be that they be well-prepared to take their wards everywhere in India to a common level of attainment in the national language in as short a time as possible.

This brings us to the question of the expected level of attainment in Hindi at various stages, both in the Hindi speaking and the non-Hindi States. Some work in this direction has already been

1. NCERT. *The Teaching of English in India : Report of an All-India Conference*. New Delhi, 1963, P. 38.

done in the Department of Curriculum and Evaluation of the N.I.E. with regard to the teaching of Hindi as mother-tongue. It is possible now to say with some definiteness as to what specific linguistic abilities we may expect of our children at a particular stage of their school career. Under this programme the four main linguistic abilities of understanding the spoken word, speaking, reading and writing are spelled out in concrete terms and then an indication is made as to what level of achievement is expected at a certain stage in a specific linguistic ability, say, that of narrating an incident. A similar programme has to be carried out for the non-Hindi regions as well.

Suggestions for Improvement of the Training Programme for Hindi Teachers

The number of teacher-training institutions is very large in our country. They are of various types and are spread all over India. Thousands of teacher-trainees are preparing themselves every year in these institutions to teach Hindi both as mother-tongue and as a second language. Thus we have at least a well-established set-up whereby we can give a new orientation to the preparation of Hindi teachers and consequently to the teaching of Hindi in our schools. The following points may serve as guide-lines while devising new programmes for the training of Hindi teachers.

1. Study of linguistics should be compulsory for Hindi Teachers

It is unfortunate that almost the whole syllabus in the teaching of language revolves around such topics as the methods of teaching poetry, prose, and devices of telling the meaning of new words etc. As experience has shown these 'methods' do not take us very far. Very little attention is paid in the training-colleges to develop an insight in the prospective teachers into the working of the language they are going to teach. Few Hindi teachers could tell today how many phonemes or significant sounds there are in Hindi. If asked this question, they would almost mechanically repeat the Hindi alphabet they learnt as children. They have never cared to analyse the Hindi sounds themselves or to find out how these sounds are produced. Consequently they not only neglect the oral training of their pupils, they do not even care to correct their own speech. Already, occupied with the problems of teaching 'prose' and 'poetry', they find the teaching of correct pronunciation too trivial a matter.

A similar thing might be said about the analysis of written Hindi which is faultily based on the analysis of written English. Very few Hindi teachers could satisfactorily analyse a Hindi sentence and say what precise function a word or a group of words performs therein. A good training programme for Hindi teachers will see to it that the teacher-trainees have a thorough knowledge of the instrument the use of which they are going to teach to their pupils. This is much more important for the teachers of Hindi as a second language for whose help and guidance not much work has been done so far.

2. *The Literary Content needs to be given a place in the Curriculum of Training Colleges*

A few Hindi teachers have had some grounding in the literature of the language, but a majority of them are as innocent of the literary aspect of Hindi as they are of the linguistic aspect. It is important that Hindi teachers have good grasp of the essential features of Hindi literature even when they are training themselves to teach Hindi to the elementary classes in non-Hindi areas. Identification with the cause of teaching a language is easier if one has some emotional affinity with its literature. A teacher who appreciates Premchand or Pant will teach Hindi with greater enthusiasm and greater insight than one to whom Hindi has been only a means of doing some transaction in the bazar or of viewing some films. A good training programme for Hindi teachers will provide for a refresher course in Hindi literature. At the same time it will also introduce the future teachers of Hindi to the best in the literature of other Indian languages. This will widen their mental horizons and will enable them to appreciate the essential unity to Indian thought.

3. *A sense of active participation in the cultural and economic revival of the country has to be inculcated in teachers of Hindi*

No language exists or could exist without a content. And its content is not only the literary one. In fact most of the linguistic transaction that takes place either orally or in writing is for a purpose other than literary. So while a language teacher is teaching prose and poetry, he is in fact teaching ideas about social, economic, political, cultural and spiritual life. We have an urgent need in our country of the revival of indigenous educational ideas especially because we are depending too much on imported ideas howsoever unsuitable. A Hindi teacher, whether he is teaching Hindi in the North or in the South, would see to it that his pupils begin to think independently in that language. Unfortunately our training colleges, in their blind pursuit of the so-called 'methods', do everything possible to discourage independent thinking. Even a slight change in the syllabus for the methods of teaching Hindi is disapproved. The whole atmosphere of the training colleges has to be changed. If professors of philosophy and psychology, for example, do not have any original and creative thoughts and teach only imported ideas, which very seldom have any relevance to the Indian conditions, the lecturer in Hindi may not feel unduly guilty about borrowing his 'methods' from the Western books rather than develop his own. The unfortunate thing is that while the damage from the blindly borrowed philosophical and psychological ideas is confined only to a few persons in training colleges or to a small part of the total personality of the student community, the effect on the thinking faculty of a prospective Hindi teacher is devastating; with the result generation after generation of school children grow mentally stunted.

Our teacher-training institutions can help very much the cause of social change if they make the prospective teachers of Hindi realize that his is going to be the most important and difficult assignment in

the schools. He will have to teach not only a few pieces of Hindi prose and poetry but virtually all subjects in some form or other because they all find a place in language text-books. A good Hindi teacher must acquire some knowledge of different branches of natural sciences like physics, chemistry, biology, astronomy, etc., Then only will he be able to do justice to the lessons in Hindi.

Above all a Hindi teacher, like teachers of other languages, will be required to teach his pupil how to think boldly and express his ideas clearly and concisely. No Hindi teacher can accomplish this task, unless he himself has these qualities. A training institution can do much to help the prospective Hindi teachers develop these qualities in themselves.

4. *The duration of the training-course for Hindi teachers should be two years*

The period of nine months is too short especially for pupil-teachers who have only an indifferent knowledge of Hindi. A longer training period would enable the trainees to have a better command over the language as well as the techniques to teach it. Student-teachers may be admitted after graduation and, with proper planning it should not be impossible to equip them with more knowledge and skills in two years than they would have acquired in a two-year M.A. plus a one-year B.Ed. course. We may adopt here some flexible approach but the essential point is that the future teacher of Hindi should remain at least for two years in an atmosphere where learning and teaching of language go together. This would give him a better insight into how language works. He would be better able to discover his deficient areas and make up for that deficiency by taking appropriate courses.

A new programme may be evolved with the approval and cooperation of the concerned universities so that a two-year course may enable a student to get an M.A. in Hindi with some diploma entitling him to teach Hindi in schools. For those students who already have an M.A. in Hindi literature, the course may be of one year's duration with a greater emphasis on the linguistic aspect.

5. *The practice-teaching programme should be more realistic and extended over a longer period*

The slipshod manner in which practice-teaching of Hindi is conducted today is little more than useless. The very short period (sometimes the whole teaching-practice is finished within 10-15 days of block-teaching) does not give an opportunity to the Hindi teacher to understand either his subject or his pupils or, frankly, himself. Instead of feeling enlightened at the end of practice-teaching a teacher-trainee usually heaves a sigh of relief when the prescribed number of teaching lessons is over.

There is a lot of scope for the improvement of the practice-teaching programme. If the burden of the theoretical papers is

lessened, then more time can be easily found, even in the one year B.Ed. course, for the practical aspects of teaching Hindi a good part of which can take place in the realistic setting of the school itself.

Out of all teachers, the Hindi teacher has to know more about various aspects of life. He should be given an opportunity to observe linguistic behaviour of children over a sufficiently long period of time before he embarks upon the task of guiding that behaviour. Time spent in a school is thus much more fruitfully utilized than the time spent in the lecture-hall of a training college. The prospective teacher of Hindi should try to learn from the regular teachers of the school, from the principal, from the syllabus-makers, text-book writers and all other sources rather than only from the books written on the methods of teaching Hindi. He should freely discuss his problems with experienced people who are able to guide him, and then he should make his own judgments and decisions.

Language is as varied as life and a teacher of languages should be so well prepared that he is able not only to teach a subject but to provide a new orientation to the whole life of his pupils.

SECTION II

INTRODUCTION

Free India attaches the greatest importance to the development of Indian languages, especially the fourteen national languages including Hindi, the National official link-language. These have been enumerated in the Constitution. India's glorious culture and its high ideals, rather the soul of India, can find expression only through the medium of these languages. The link-language, *i.e.*, Hindi, serves as a common medium of exchange and inter-course for all the regions. It is also accepted that emotional integration and the consequent national unity and solidarity can be brought about only through a common all-India language. It is on account of this and also because of the desire to enable Hindi to take the place of English as the official language as early as possible, a greater emphasis is placed in its propagation and development in non-Hindi States.

With the blessings of Mahatma Gandhi, who for the first time mooted the idea of a national language and who from out of all the Indian languages selected Hindi for this purpose that Hindi got due recognition in the country. It may be noted that a number of voluntary organisations did valuable work for the spread of Hindi since long. Their names are :

TABLE 36

Organisation for the Spread of Hindi

<i>S. No.</i>	<i>Organisation</i>	<i>Date of Establishment</i>	<i>Important journals published</i>
1.	Nagari Pracharini Sabha, Varanasi	1893	Nagri Pracharini Patrika and other publications.
2.	Hindi Sahitya Sammelan, Prayag	1910	Sammelan Patrika and Madhyam.
3.	Dakshina Bharat Hindi Prachar Sabha, Madras.	1918	Hindi Prachar Samachar.
4.	Gujarathi Vidya Peeth	1920	—
5.	Hindustani Academi, Prayag	1927	Hindustani.
6.	Rashtra-Bhasa Prachar Samiti Wardha	1936	(1) Rashtrabharati. (2) Rashtrabhasha.
7.	Maharashtra Rashtrabhasha Prachar Samiti, Poona	1937	Jai Bharati.
8.	Rashtrabhasha Prachar Sabha, Poona	1937	Rashtravani.
9.	Hindustani Prachar Sabha, Wardha (Now at New Delhi).	1942	—
10.	Bihar Rashtrabhasha Parishad, Patna	1947	Parishat Patrika.
11.	Akhil Bharateeya Hindi Parishad Agra	1949	
12.	Sahitya Akademi, New Delhi	1954	National Bibliography of Indian Literature, Who is who of Indian writers and Indian Literature.
13.	Kerala Hindi Prachar Sabha, Trivandrum	1948	Keral Jyoti.

Hindi *prachar* was in fact one of the important programmes of the freedom movement. These and other sister organisations conducted graded classes in Hindi, held examinations and awarded Diplomas of their own to successful candidates. Hindi was also taught as an optional language in all levels of instruction in some of the States.

Independence ushered in a new era in the spread of Hindi. Many States are now providing instruction in Hindi as a compulsory subject in secondary schools, even though it is as yet an optional or non-examination subject in some of them. It is a compulsory subject from the 5th standard onwards in Kerala. Universities also provide facilities for its study as an optional second language and also as a main subject for graduate and post-graduate degrees, and for advance studies and research work in higher fields of knowledge of the language and literature as well. Seminars and refresher courses are also being arranged by these universities enabling the students and teachers to come into contact with eminent scholars in Hindi from different parts of India. The Central Hindi Directorate and the University Grants Commission are assisting the propagation of Hindi by providing adequate funds, advice and resource personnel.

Two of the voluntary Hindi organizations, *viz.*, the Sahitya Sammelan and the Dakshina Bharat Hindi Prachar Sabha, Madras, have been given statutory recognition and university status by Acts of Parliament in the post-independence period. Committees have also been constituted to prepare technical terms in Hindi and for the translation and writing of suitable text and reference books in various branches of knowledge. Lecture and study tours are also being arranged on a large scale now-a-days to increase the contact between the various linguistic regions. Hindi is also being taught to Government officials under the Hindi teaching scheme of the Home Department.

Popularisation of Hindi by the Ministry of Education.—Special mention has to be made here about the schemes and activities of the Ministry of Education, Government of India for the development and popularisation of Hindi as the All-India language. The Kendriya Sikshan Mandal, Agra is a non-statutory autonomous body, constituted with members from Non-Hindi speaking States, to manage the affairs of the Kendriya Hindi Sansthan, Agra (Central Hindi Institute, Agra) set up by the Ministry of Education for the training of Hindi teachers of non-Hindi speaking States. It is necessary that Hindi should be taught well at the school level in the present set-up of the tri-language structure in our educational system (regional language, English and Hindi).

The Institute runs three regular courses, *viz.*, (1) Hindi Sikshan Praveen, (2) Hindi Sikshan Parangat and (3) Hindi Nishnat. These have been designed for various categories of Hindi teachers, *viz.*, Primary, Secondary, Higher Secondary, Hindi Teaching Scheme and Hindi Training Colleges. The Institute is admitting students from all non-Hindi states to the three courses. Board and lodging facilities are provided and liberal scholarships are awarded to all students by the Institute.

The Institute also holds periodical refresher courses. They are of three types: the short-term course of four to six weeks' duration; the medium term course of three months and the long-term course of six months. For these, Hindi teachers are deputed by each state. The refresher courses serve two purposes, *viz.*, contact with the Hindi-speaking people and acquisition of the latest methods of teaching Hindi. The deputees are given sufficient finance for their journey and board and lodging at the venue of the course.

The scheme of study for the three regular courses consists not only method subject, such as methodology in general and with special reference to Hindi and practical work such as practice teaching preparation of teaching aids, etc., but also of content subjects such as history of Hindi language and literature, general philology and Hind linguistics, literary appreciation and rhetorics and Indian culture with special reference to the national movement. Problems connected with phonetics and Hindi grammar, development of Hindi as the official language, Hindi teaching in non-Hindi states at different levels of instruction, etc., find a place in the programme for the refresher courses.

Study tours and cultural programmes are invariably included in all the extra-curricular activities of the Institute. The Institute also called a conference of the principals of Hindi training colleges of non-Hindi areas in February, 1966 to find out ways and means of bringing about co-ordination, integration and uniformity in Hindi Training in these states.

The Hindi propagation programme of the Central Government also envisaged the starting of a number of training colleges in non-Hindi states from the Third Five-Year Plan onwards to impart efficient training to Hindi teachers. A model syllabus was also drawn up by the Ministry of Education, Government of India, to be followed in these colleges. They were, however, allowing sufficient latitude for changes according to local conditions.

The various non-Hindi States such as Kerala, Mysore, Madras, Andhra Pradesh, Orissa, West Bengal, Assam, Gujarat, Jammu and Kashmir have taken advantage of this scheme and have started training colleges. But each State has moved from the set pattern with the result that differences at present exist not only in the administrative and organisational set-up, but also in the scheme of study and examination, salary scales, qualifications and emoluments of the members of the staff.

CRITICAL ANALYSIS OF THE EXISTING POSITION OF TEACHER EDUCATION (HINDI IN KERALA)

In 1961, the Government of Kerala started its own training college for Hindi Teachers at Ramavarmapuram, Trichur under the Hindi propagation scheme during the Third Plan period with cent percent

central aid for recurring and non-recurring expenditure for the first five years. This is the first of its kind and perhaps the biggest in the sense that it has already trained more than 700 Hindi teachers. The college is well-established now with a spacious pucca building, a good library containing about 5,000 volumes, sufficient furniture and audio-visual aids like the tape-recorder, epidiascope, the projector and the radio. A hostel for women students in a neighbouring government educational institution, nearing completion, has been promised for the institution. There was also a proposal for purchasing a college van which was later dropped by the authorities.

The teaching staff of the college at present consists of a principal (Rs. 600-900), a professor (Rs. 550-800) and 5 lecturers (Rs. 300-600). The five posts of lecturers have been assigned one each to (1) principles and methods of teaching Hindi, (2) educational psychology, (3) linguistics, (4) Indian history and culture, and (5) Hindi literature and literary appreciation. This college also provides instruction in drawing and physical education, which is imparted by part-time teachers. The basic qualifications for the lecturers are M.A. in Hindi and B.T. or equivalent (first or second class in both) with M.A. or equivalent in the respective subjects and three years of teaching experience in the case of lecturers and 5 years and 10 years of collegiate teaching experience respectively for the Professor and the Principal.

Till the end of the last year the College was conducting two courses, *viz.*, the Certificate Course and the Diploma Course for upper primary and high school Hindi teachers respectively. Trainees are departmentally selected from among the existing teachers. The Certificate course has, however, been discontinued this year. The present strength of the Diploma Course is 210. The Diplomas are awarded to these trainees who pass out successfully in the two parts—theory and practical. The examination is conducted by the Government of Kerala. The Examination Board consists of five members—one representative of the Central Government, two representatives of arts colleges (one private and one government), and one principal of a high school nominated by the Director of Public Instruction. The Principal of this college is the *ex-officio* member (Convener). The assessment of the practical work is made by the supervising members of the staff, the headmasters and Hindi teachers of the various high schools to which the trainees go for practical teaching. The College has no model school of its own at present. From the Fourth period onwards, the institution has come under the committed expenditure of the Kerala State. The College follows the scheme, syllabus etc. framed by the Ministry of Education on an all-India pattern with slight modifications to suit local conditions. The syllabus is more or less the same as that of the Central Hindi Institute, Agra.

The College publishes a magazine named 'Prasikshan Prasoon' which is bilingual. The course ensures a sufficiently good standard and necessary national outlook needed for Hindi teaching. The

College could take two major study tours to the Hindi-speaking areas like Agra, Delhi, Jaipur, Benaras, Allahabad, etc., which enabled the trainees to enrich their knowledge by coming into direct contact with the culture of these places and get a grasp of the spoken Hindi and its dialects in their natural set-up. It may be noted that the Hindi training colleges of other non-Hindi States more or less work on similar line.

This institution has to face several handicaps which hamper its progress. Teacher-student contact is one of the most important factors in effective teacher education. Teacher education can be made more effective if it is provided with residential accommodation both for staff and students. It helps in the planning and execution of extra-curricular activities, which is so much necessary for better quality in teacher education. For necessary demonstration and experiment for the integration of theory and practice of education as well as for successful teaching practice, there should also be a model school under the control of the training college.

This training college with the strength of 210 has to depend on about 17 or 18 high schools for the conduct of teaching practice extending for about two months. The present syllabus provides only 3 periods a week for Hindi. The concerned Hindi teachers and the headmasters have to do additional work to supervise the practice teaching and evaluate the skill. Some honorarium for this additional work should be paid to them. This will act as an incentive for their readiness in the supervision work.

Every trainee of this college gets a minimum allowance of Rs. 40/- per mensem. The earmarked plan schemes with no assurance to the State Government for future continuity, the service rules, service conditions and the very low salary scales without any security of service after training are directly or indirectly responsible for the discontentment of the Hindi trainees which acts as a hindrance for preparation of competent teachers. These Hindi teachers who have to work as dedicated teachers for the national unity may be given what they deserve. Then only will they be able to undertake the responsibility towards the nation. It is regrettable that most of the Hindi teachers are discontented as they can start their service under Government only as part-time teachers. Private schools, of courses, employ them but each teacher has to pay a donation of Rs. 2,000/- to Rs. 3,000/- to the management. A socio-economic study of the background of these teachers was undertaken by the writer which revealed that these Hindi teachers as a class are very poor. They are, in fact, half-starved.

Much is to be done in this field to improve the economic status of these part-time teachers in view of their most important role in giving Hindi its right place as official language. The Central Government has to make adequate arrangements in the State to provide

the teachers with better salary scales and service security for effective class-room teaching which will pave the way for the development of the link-language.

The Hindi trainees lack the habit of talking in Hindi because they do not have the chance of hearing this language. Thus they do not get adequate chance for free expression. They teach Hindi in Malayalam adopting the Translation Method. Thus every trainee is a problem in this aspect itself. The lack of confidence to express correctly as well as the difficulty to comprehend the lectures in Hindi make them a fish out of water in the college for some time, for the already acquired habits interfere with their progress at every step. This difficulty arises because of the fact that they have not been familiar with the correct pronunciation and intonation of the language which is mostly needed for practical life. Most of the Hindi teachers come out with the basic qualification from voluntary organisations which are not provided with necessary teaching facilities. Unfortunately faulty learning of this language proves a serious hindrance in the correct expression both in speech and writing. So we have to pay more attention for the qualitative improvement of the speech habits before the actual conduct of the teaching practice. Teaching the correct pronunciation and intonation is the greatest task before us. Great work is to be done both on the part of the lecturer and the trainee in imparting and acquiring the correct language aspects.

The training of teachers is greatly influenced by their background knowledge of Sanskrit and the mother-tongue. Special attention should be paid to the similarities and differences with regard to pronunciation, meaning of words, etc. The common link with Sanskrit and Malayalam presents a problem in understanding correctly words of the same type with different meanings and pronunciations in Hindi and Malayalam. So much time is to be devoted to impart the skill to the teachers for speaking fluently and expressing correctly. This difficulty can be removed if the College has an Extension Service Centre. It can provide short-term courses, refresher courses and in-service training for Hindi teachers at random.

CURRICULUM

Hindi, which has to take the most important place as required by the Constitution, is unfortunately given the least important place in the curriculum, *i.e.*, only three periods a week. But fortunately its teaching is started very late in schools. The emphasis laid on the Direct Method and correct speech habits during the training period proves fruitless as they hardly find time to introduce these methods in their schools along with the job of completing a heavy text-book.

There is no provision for an effective follow-up programme. The inspecting officers, excepting a few, are not in a position to do proper evaluation and give suggestions and encouragement to teachers.

Naturally they fall back to old habits. This can be prevented only by the appointment of subject inspectors and the provision of one period per day for the subject absolutely necessary for the continuity of learning. It goes without saying that the schools should be provided with sufficient reference books and library books also.

Voluntary organisations have done much for the propagation of Hindi and now they have started training colleges with Hindi as the medium of instruction but neither the Government nor the University have any control over these voluntary organisations with the result that there is a general feeling that satisfactory standard in training is not maintained. The greatest handicap of these organisations is that Government are not willing to provide practising schools. The problem can be solved only by insisting on a uniformity of standard by bringing systematisation in the staff pattern, syllabi and evaluation procedures. There should be a machinery at the national, state or university level to check and maintain uniform standard regarding the basic qualifications for selection and the internal and external assessment during the training period.

Under the existing system, a high school Hindi teacher with Diploma in Hindi Teaching or the 'Parangath' of Agra is declared equivalent to B.Ed. But he is not exempted from doing B.Ed., even when he becomes a graduate. He has to do B.Ed., if he ever aims to be a headmaster or an officer in the Education Department. It may be noted that during the B.Ed. course, he has to learn the same subject in the medium of English which he has studied for Hindi Diploma through Hindi. Thus instead of giving a chance for increasing his efficiency and skill for Hindi teaching, one year is almost he loses in the struggle to get through the B.Ed. At the same time he loses his contact with Hindi. The nation spends twice on the same teacher for almost the same course with no considerable achievement. Hence my suggestion is that the Diploma examination may be put on par with B.Ed., as the high school teachers with basic qualification B.A., (or Vidwan title or Praveen) equivalent to B.A., are getting trained.

P.D. Mudaliar

The language teaching in India is even now carried on traditional lines. A graduate with one/or two languages as his electives is considered competent to teach that/those languages provided he undergoes a training programme for a formal degree in education. In most of the States there are no special programmes for preparing regional language teachers. These languages are offered as part of the approved course of B.Ed./B.T./L.T. degree and some practice teaching is done in them after one has sat through a couple of lectures on their theoretical aspects of teaching normally entitled, methodology course. A few exceptions are, however, in existence. Madras has a course for specialist teachers under which Language Pandits are prepared. The Tamil Pandits' course is of five months' duration and is conducted twice a year. These Language Pandits are for Tamil, Malayalam, Urdu, Hindi and Kannada. The Hindi Pandits' course lasts nine months and the others are of six months' duration. There are certain institutions for Language Pandits only; at least there is one exclusively for women. These Language Pandits are required to possess in addition to their specialised diploma, a trained teachers' certificate.

In Kerala, like Madras, there are a few training centres for preparing language teachers, all of them having been started as late as 1962. These teachers are prepared for teaching Malayalam, Arabic, Tamil and Kannada, mostly for those who teach up to secondary level. The Himachal Pradesh is the luckiest in this respect. It has one post-graduate co-educational training college at Solan where fifty language teachers (Hindi and Sanskrit) are prepared every year.

The case of English is, however, different and is treated on a different footing altogether. Ever since Independence the prestige and job-fetching value of English has increased beyond measure. All States are keen to raise their standard of English teaching in their schools. With a view to achieving this objective. Institutes of English Language Teaching have come up at several places in India. Hyderabad has a Central Institute, but apart from it there are a number of State Institutes as well. For instance, Madhya Pradesh opened one at Bhopal in 1964, Bihar has her Institute at Patna, Punjab has one at Chandigarh and Uttar Pradesh has hers at Allahabad. Other

States are also keen to start their own Institutes. The British Council in India is keenly interested in this programme.

Most of these institutes have improving the qualification of the teachers and raising of the standard of teaching English as their major objectives. To raise teaching of English on more scientific lines is also their aim. They run in most cases refresher-cum-in-service programme of six-month to one academic session duration. The teachers during their period of study get either their salary or stipend or both. Although these institutes have as yet not reached beyond their infancy, their impact is being felt gradually.

Since independence, the Indian languages have come to their own as a result of the great national awakening.

The old step-motherly treatment that these languages had long endured is a thing of the past. During the post-independent years, the younger generation of both boys and girls has been taking to their respective languages with great gusto. The fall from grace which characterised the speaker in Indian languages has rapidly given place to the great acclamation which those that can express themselves in these languages are able to enjoy. The renaissance is not yet complete; the resurgence is still taking place; new scholars and writers are fast coming upon the scene. All this is because of the will of the people which has expressed itself in the state legislatures and which ultimately has culminated in the introduction of the mother-tongue not only as the medium of instruction, but also as the language of administration. The older generation still persists with a pertinacity that is their characteristic in favour of English which failed to percolate to the masses during the days of British administration. It is only the classes that have enjoyed its monopoly and English education has inevitably introduced a caste system in Indian society such as those that could speak and write English and those that could not. In no democracy has ever language failed to be a unifying factor. It is the self-determination of the people that has succeeded in accenting the importance of the state language in the life of the people. Here and there the cry is often raised that the English language alone can open out a vista to world knowledge. But to us one non-Indian language is as important as another. Everywhere there is a craze for Russian, because the Russian language is considered to be the repository of all the scientific and technological knowledge of the world. A non-Indian language may be studied for its utility value, but at no time can that language be a bar to the progress of the mother-tongue.

It is, therefore, admitted without any reservation that the Indian languages in their respective states should bloom with all their efflorescence and that there should be no mental gap between the language of one's mother's knee which is the medium of instruction and the language of administration in which the people get involved. the question arises therefore whether our Indian languages should

not be properly taught to the coming generation, so that all sorts of inhibitions are completely obliterated and that the free growth of the language is accelerated. While the unlettered are able to express their language with facility, it is an irony of fate that the highly-lettered and the well-informed person is unable sometimes to integrate his thought and language with ease and accuracy. This may be because of their teachers or their methods of teaching.

In times of yore there was nothing like a code of teaching which teachers had to conform to. It was the parent that was more an ideal teacher to his son than anybody else, and teaching was an art practised in the family and handed down from generation to generation. The parent-teacher taught in such a manner as to be learnt, so that nothing was taught that was not learnt and there was a harmony between the two processes of teaching and learning in a situation where the teacher-parent understood the needs of his child and taught him with understanding and sympathy. So far as our Indian languages are concerned, the only method of instruction was articulation by the teacher, responsive imitation by the pupil and memorization as the *sumum bonum* of all teaching and learning. Learning was put to the test as a feat of repetition from memory. The texts were remembered for their utility to life. Even now the older generation quote profusely from the texts in support of a contention.

When our own language schools were established, no teacher training was insisted upon, save that the teacher was expected to be learned and highly proficient in the language. If the art of communication can be equated with the art of teaching the language, teacher of early times was very eloquent in the communicative processes; perhaps cultivated a teacher's voice, a teacher's manner of exposition, a teacher's delivery, and above all an impressionable manner which unfailingly impressed his pupils. Learning by rote was the order of the day. The text-book was not the medium of teaching. The teacher directly dealt with the pupil, and the pupil had direct rapport with him. The text-book in the form of a middle-man was unknown. It was not allowed to substitute the teacher or replace him. It was nothing except perhaps it was a referencer to the teacher more than to the pupil. Reading consisted in the repetition of the teachers' oral communication and oral transmission. Writing consisted in the writing of the matter heard or read and expression took the form of citations from the text. Mastery of a language comprised of the texts and the grammars. The grammars were a discipline by themselves and the discipline was of a formal character. Those were days of formal discipline intended to sharpen the faculties. The knowledge of the texts conferred learnedness on the learner. The mark of learnedness was one's ability to reproduce exuberantly from the texts. The scholars were experts in the grammar of the language. They were primarily

versifiers, expatiators and authorities for the interpretation of the texts. One important point to note is that most of them were teachers under the *Guru Sishya* discipline and who were proud of their own learning and loved their disciples. The teacher always looked upon himself as a student and was never tired of learning. Every teacher practised *upa-adhyayanam* with his pupils in session. All this was possible as long as the learners were few and the teachers were fewer and of season. But in the context of mass education, teaching which was individualistic was obliged to become pluralistic. When schools were established, the teachers were required to teach large numbers according to their grades. The teachers themselves ceased to be of that calibre which characterized their forbearance of past generations. Education became subject to progressive gradations, and teachers of various levels of learning came into existence. The curriculum of studies became spiral. It is not surprising therefore that low qualified persons became teachers with or without the hallmark of efficiency or equipment or teaching abilities. This state of affairs has obviously necessitated the training of teachers.

It is unfortunate that in the set-up of teacher education in our country, there are not enough training institutions specially designed for training language teachers. The language teachers are of course given some kind of an apology of training just for a period of five months (as in the Madras State) in certain subjects like Educational Psychology, School Organisation, and Methods of Teaching. Instruction is given in a scrappy manner. Besides some kind of practice teaching is provided; and at the end of the course after an examination in Theory, the teacher is declared to have passed his training course. This practice may just nominally answer to the needs of training language teachers. The complaint is often vehemently made that the language teacher of today is full of inadequacies and that he does not fulfil the needs of efficient teaching. Such teachers just "cover" the syllabus without making their teaching "cover" the pupils. A vicious circle starts, as a result of which the teacher at one level has to blame the teacher at the next lower level. As a matter of fact the teachers are the products at all levels of own schools and colleges including training institutions. The vicious circle has to be snapped at some stage, so that the blame cannot be laid at any door. In other words teacher-training of language teachers has to receive much greater attention than ever before in the context of the great resurgence that has taken place of language development under natural conditions in the country.

The older generation would always repose their faith in the traditional methods of teaching and learning and claim that only a return to these methods would be a panacea for all the ills of linguistic deficiencies in our educational institutions. They would insist that all the subject-matter of learning should be committed to memory, that grammar should have its place restored in the curriculum of studies, that far more classical texts should be taught, and that oral articulation should be as important as written expression. Neo-

educationists who are language specialists demand a break with the traditions and the introduction of innovations in the methods of teaching. In this context it has to be borne in mind that our Indian languages have each a genius of its own and the languages themselves in the processes of their development have made their own history. This is characteristic of such ancient languages as Sanskrit and Tamil besides other languages which lay claim to antiquity or even divine origin. Some of these languages have enriched themselves even in states of oral transmission from generation to generation; and after they have come to be written down, they have enormously enriched themselves, until they have been able to establish purisms and orthodoxies of their own. But in recent years more particularly from the dawn of the present century, there have been great scholars and writers under the influence of bilingualism, who have been able to transplant literary forms and styles of non-Indian origin not only for the sake of novelty but also with due regard to enrichment and expansion of linguistic horizons. It is this that we find in all the fourteen languages enshrined in the Constitution. Besides there has been a large plethora of new patterns of language forms which cannot be ignored either by the teacher or by the learner. These constitute the rich flow of new styles of speech and writing, new literary forms of expression, influx of new words deliberately coined for currency, and new phrases and idioms rendered out of necessity and introduced at administration levels to enforce currency primarily among the educated and secondarily among the masses by a process of infiltration. These have flooded even the most ancient languages of the country not to speak of those that have evolved in recent centuries. Another aspect of language development which cannot be ignored in recent times is what may be called the language at the sedimentary level—the language of the so-called rural folk uncontaminated by urban or semi-urban influences. These have spoken their respective language from generation to generation in an untutored way, but as a very telling and effective process of communication. Their semantics and linguistic forms have got mixed up with the advancing tide of enrichment not to corrupt but to enrich the languages. Even today where only one language is spoken, the expression of ideas by such folk is not only fluent with words conveying unambiguous meaning but also unsullied by possible variances. This language in currency can always be relied upon to sustain itself in its pristine purity, because of its indigenous character and isolated existence.

It is against this background of the development of our Indian languages that the language teacher of modern times has to be inducted into the teaching discipline. The Indian language teacher emerges generally from two streams of language learning—one is the traditional course leading to an oriental degree or diploma conferring the title of a Pandita or Vidvan in the language or the Pulaver in the Tamil country, and the other a degree in the language as one of the subjects of the curriculum for the first degree or the second higher degree.

The teacher for language training must possess an oriental title or a degree in the language and training can confer another degree as its hallmark. The oriental title holders may be entitled to a diploma after their training. For graduates in the languages, the course is for one full-year leading to the degree of B.Ed. and it has to be appraised whether it is a course in Teacher Education or a course in developing the skills of teaching a language. It is ostensibly a comprehensive course in the general subjects of education and in two electives one of which is the mother-tongue. In those cases where the trainee has majored in a language at the first degree, a course such as this will be comprehensive in the general background of which, the trainee can evolve into a language teacher. This modern tendency to train a language teacher is diametrically opposed to the traditional set-up of anybody setting himself up as a teacher, after obtaining a hallmark in the language. The greatest virtue implicit in the tradition is the full equipment of the teacher in the language arts, and the ability to teach without any systematic course in the theory of teaching. But in our country where the monitorial system has been a much respected tradition of our schools big or small, the monitor more often than not stepped into the shoes of his preceptor and became conversant with his methods of teaching. He got his blessings to succeed him as a teacher. The family produced a teacher traditionally; and it was often so in our rural areas which have produced the greatest savants of considerable learning who have contributed to the many-sided development of their respective languages. Their learnedness, it is refreshing to recall, consisted of a deep study of the language, literature, and grammar up to the highest; and a specialisation in any of them resorted to in pursuance of the highest aptitude of which one was capable. It is in this way that every language of our country has produced the best litterateurs who have played their role as poets, essayists, linguists, grammarians; and, to speak in modern jargon, short story writers, novelists, folk poets, tawdry poets and what not, grappling with the tendencies, current and extant in countries outside our own. The resort to these fashions is the result of the efflorescence of those who have read a primary foreign language and acquainted themselves with their own mother-tongue as a secondary language of vice versa. These patterns have introduced a dichotomy in most of our Indian languages such as ancient literature of the classics and modern literature. Scholars dally between these two: one set of them clinging very orthodoxically to the old and swearing by the genius inherent in it and the others castigating the old and pleading for the ushering in of the new tendencies. As a matter of fact our educational institutions, to avoid controversies, introduce a judicious combination of both at all levels clenching neither. Even among scholars there are those who have the greatest faith only in classical literature and grammar and who derisively discard the new tendencies. They play the role of purists and agitate for the sustenance of purism as a panacea for the corrosive modernisms which got imbedded in most our languages as a result of modern tendencies in the language phonemes, morphemes; semantics

and even syntax. These have dethroned grammar from its exalted status of a discipline to that of a mere tool not to serve but to subserve, not to rule but to be subjugated, not to dictate but to follow the exuberance of our expressions. It is in this context of not an innovation but a revolution that is taking place in our Indian languages that the teaching of the mother-tongue is put in a quandary. The indifference to this important aspect has resulted imperceptibly in the deterioration in the teaching of languages in our country. There is absolutely no gainsaying the fact that the present generation of our pupils are the products of an imperceptible effusion of language enrichment that is taking place in all walks and spheres of life at all levels; and the inexhaustible source of this growth is unmistakably the rapid pace at which the thoughts and feelings of the people hasten to find expression both in speaking and in writing with impunity, regardless of established codes and conventions of literary orthodoxies. On that score what is in currency is neither heterodox nor heresy, but it constitutes the swift current of the age of enlightenment which is the result of the impact of world thoughts and world ideas and the shaping of a world culture. So the teacher of Indian language, who does not adjust, finds himself miserably reduced to the position of an unwanted person in the body politic of our educational institutions; his status is challenged, he is looked upon as some repository of some antiquated lore. The teacher of the foreign language does not rub shoulders with him, and he lives in stately isolation as a *persona grata*. The knowledge teachers imagine themselves to be superior to the mother-tongue teachers for the reason that their knowledge and lore are incomprehensible to their language colleague and that their thoughts and ideas are inexpressible in the mother tongue.

It is this challenging situation that confronts our mother-tongue teachers who are equally puffed up with their own self-importance as teachers of the mother-tongue which has come to be invested with a primordial place in the curriculum and who also feel flattered that, by virtue of its important place, they are as a class more important than others of their fraternity. But they have not disillusioned themselves, so as to seek their rightful place as important teachers in the educational set-up of our country. It may be asked whether their present equipment would suffice. The fact is that even courses leading to oriental diplomas are much too diluted that they have become much too commonplace. The equipment at the degree level in most of the universities, it cannot be refuted, is considered to be most apologetic, the degree holder emerging with as much poor equipment in his own mother-tongue as in the foreign language. It is therefore necessary that graduate language teachers should have studied only their own language for specialisation without the burden of an additional foreign language with equal status. In the degree stage the curriculum should be so altered that those specialising in a language or for that matter any knowledge-subject are not burdened with ancillaries and minor subjects, militating against concentrated specialisation. The graduate should not be inferior to the oriental

diploma holder in point of equipment. But he may have the additional advantage of his course in general education comprising of arts or science. The lack of adequate equipment and the inability of the ill-equipped teacher to keep pace with the pace of the times and the pace at which his pupils act and think, have resulted in the fall of standards of our pupils who are exposed to social processes. A good deal of gregariousness that is rampant amongst our student population is due to the elusive hold primarily of the mother-tongue teachers on them. The strong bonds that united the mother-tongue teachers of old and their pupils who looked upon them with awe and respect not only for their great learning, not only for the love that they bore to them but also for their infallibility which they built around themselves as a living index of reference at all times have ceased to be. It is these qualities that have to be rehabilitated in the teacher of the mother-tongue who must come back to his own and again become a wonder as to how such a small head could carry so much of all he knew.

The training of the language teacher should not be in the nature of a sojourn in a training institution. The oriental diploma holders should have the same quantity and quality of training as the graduates in languages. The duration had better be not part of a year as in the case of our *pandits* or *vidwans* or of shortened courses which are fast getting introduced. In this connection it may be treason to decry the correspondence course. The language teacher should be thoroughly conversant with the foundations of education in order to know the intimate relation of the mother-tongue to the mind and personality of the growing child. In as much as the mother-tongue is the matrix contributing to the knowledge and understanding of other school subjects, the language teacher should be concerned with the total education of the child; he should consider that his is the main responsibility of the pupil's real education, of his full development, and of his growing personality. He should know that the mother-tongue has a significant bearing on the mental development of the child in the context of the mother-tongue as the medium of education and as the focal point of education.

Our present pattern of the training of teachers at the post-graduate level has relegated the mother-tongue to the level of an elective as though it bears no relation to the core of the curriculum. It is just given a subject importance; not all the teachers receive training as mother-tongue teachers in combination with a subject in which they would have majored in the Degree Course. In this connection it is desirable to recall that, during the British regime, English was compulsory during the training course; in other words every pupil-teacher received training in the methods of teaching English in addition to a knowledge subject which was the subject of his degree. It is this same status that should be given to the fourteen languages of the Constitution, and every teacher in renascent India

should be as much a teacher of his mother-tongue as he is of any other curricular subject. It is time that the status enjoyed by English during the British rule is given to the mother-tongue, so that the mother-tongue teachers form no class or caste by themselves but tow the line with other teachers who consider themselves superior beings. Every non-language teacher has necessarily to have a good linguistic background, so that he can teach his subject, whether involving verbalism or not, in a manner not leaving much to be desired on the expression side. One reason, which is not far to seek, is his lack of the power of expression and his wrong conviction that he is not concerned with language, and that therefore he can express himself in a slipshod manner without detriment to his subject interests. This has led to the shelving of the responsibility of ensuring and safeguarding the expressive abilities of the pupils on the language teacher who cannot by any legerdemain shoulder responsibilities for building up the vocabulary of expression for every single subject of the curriculum. The mother-tongue as a compulsory subject of the teacher-education curriculum will break new ground and ensure scope for better comprehension and expression through the avoidance of the present tardy use of language in the teaching of the non-language subjects resulting in retardation. This will usher in a state of affairs whereby the distinctions so invidious between mother-tongue teachers and others will cease to be, and every teacher will be first and foremost his mother-tongue teacher as a natural corollary to its improved status as the language of administration, as the medium of instruction at all levels including post-graduate education, and even the examinations of the Union Public Services Commission. So the point that the mother-tongue should get the same place which English enjoyed in the pre-independence years, needs no justification.

If this point is conceded the training of mother-tongue teachers needs to be completely reoriented on the same pattern as English in the pre-independence years. During those years English was taught well with the advantages that went with that language as the medium of instruction. English had then dominated as the language of administration and as the medium of communication.

The conditions have reversed; it is time that the Indian languages came back to their own without hindrances any longer imposed by a section of educational administrators who still enjoy the privileges of dictating amnesty to their own mother-tongue, just for the reason that they are in the privileged position of English knowing people. They have no need to play any element role any longer. On the other hand the mother-tongue teachers should come forward to say what kind of training all categories of teachers should have, because they will be in the know of the course and flow of the general linguistic current of their respective languages. They can also determine how teachers should fashion out their tasks to keep pace with the advancing tide of linguistic resurgence in all walks of life.

We have said elsewhere that it is the mother-tongue that should be the mental developer and constitute the educational base. When this comes to be conceded, the curricular pattern would also need to be reoriented. The mother-tongue teacher should be cast in a larger mould. He cannot be denied all those nuances which are conceived to proliferate the general teacher education programmes. He has to be set in all such programmes so that he *becomes* what he has *to become* by reason of his pivotal position in the educational sphere.

The mother-tongue teacher must like others have an insight into the broad ramifications of educational theory, the psychology embedded in teaching and learning, and several well-known methods of teaching in general, besides those that are particular to the teaching of the first language. It may be asked whether he requires a course in content in the present context of a demand for content courses in training programmes. Oriental diploma holders, having specialised in the language, may not need special course, for they take a full course in the *pancha lakshanas* (the grammar of letters, words, subject matter of life, rhetoric, and poetics), besides literature ancient and modern. But the degree holders upto the first degree do not have such depth; their course is of a representative character with something of everything and their knowledge of grammar may be scanty. It is they that should be given a broad course in the history of literature and grammar and comparative grammar of languages allied to their own, besides a detailed study of the grammar of their own language. It is possible to traverse this ground by a scheme designed during the first term of the course. Both require a course in linguistics in order to be familiar with the dialectic variations, so to resolve them to standard speech habits. They require to understand the phenomena of speech variations characteristic of particular social stratifications. The language teacher has to have a sense of variation in the speech and the speech-spelling relations of his pupils. This linguistic background is so essential not only in the context of one's own language, but also for discriminating between the phonemes of one's own language and those of the second and the third languages which the pupil has to study in the scheme of the three-language formula. The classical language or Sanskrit having influenced the evolution of almost all the Indian languages except perhaps Tamil, the only one of the Dravidian group which has not only afforded the Dravidian base for the other languages of its group, but also maintained its pristine purity and individuality, may be another language which the teacher of the Indian language has to be acquainted with to better understand etymological declensions and inflections, not to mention the very roots of a large proportion of the vocabulary of these languages.

The teacher of the mother-tongue should, with his background of the psychology of learning, get a knowledge of the principles of selection and grading of teaching material and an ability to appraise the textbooks in use. Above all he can be inducted into the latest

concept of evaluation in teaching which bids fair to bridge the gulf between the educative and the learning processes.

Our country urgently needs not only a reorientation of the training of the language teachers, but also their rehabilitation from some kind of a traditional neglect of their rightful place as the foremost educators in any scheme of education. The glamour of English is fast disappearing; the education of the masses is an important plank on the platform of State Governments; the educational pace has to be accelerated; the right accelerator can only be the mother-tongue teacher, than whom there can be no other; he alone can educate the mental abilities of own future generation at all mental levels through communicative processes in the medium which is incapable of any barrier between teaching and learning and which can pave the way for the acquirement of any knowledge of art or science in the educational ladder.

N.K. Sanyal

IMPORTANCE OF SCIENCE IN EDUCATION

The rapid development of science is revolutionizing the conditions of life and society. Its impact is now felt in every walk of our life. Not only are the means of production and industries dependent on science but developments in medicine, agriculture, animal husbandry and practices of public health and sanitation are based on applications of science. Inventions and discoveries of science are making the lives of modern citizens healthier and happier. Whether one wants or not, science has become a part of the fabric of everyday life. The modern citizen has not only to acquire a command of scientific principles and concepts but has to be familiar with the science vocabulary in order to understand the world he lives and where he works and to participate intelligently in his future development. "Scientific literacy" is thus increasingly becoming essential for everyone. Science has thus become an integral part of general education whatever it may be. The future citizen has to learn science as much as the traditional three R's. In fact, it may now be regarded as the fourth R of the educational frame.

The industrial expansion of the country also makes new demands of skilled personnel at different levels. These personnel need to have a background of sound science knowledge as a requirement of their professional qualifications.

For the country to progress, prosper and compete with other nations, means of production and industrial development have to be constantly improved by new researches, discoveries and inventions. The country must, therefore, produce such scientists and research workers at the higher level as would be able to work with increasingly sophisticated scientific ideas and techniques. A base of good science education at the school level is certainly a pre-requisite of this need.

The growing importance of science in general education at the school level has been recognized by government, thinkers and educationists. The report of the UNESCO Planning Mission remarks:

The evergrowing importance of science and mathematics for economy and culture of any country and that evergrowing

knowledge every year in the field of science have set the urgent task before all countries of the world to provide modern science and mathematics education to the youth so as to prepare the young people for life, for mastering technical, agricultural, medical and other specializations which are necessary for economic and cultural progress.¹

The report of the Indian Parliamentary and Scientific Committee observes:

The cumulative effect of changes worked out by science and technology effect every aspect of human existence today. Our traditional ideas of human institutions and human thoughts are undergoing a revolutionary change on account of the impact of science and technology. It goes deep into political, religious and philosophical concepts which have been nursed through centuries and which are being shaken every moment a new scientific discovery is made.²

The Parliament of Science held by the American Association for the Advancement of Science expresses :

We believe that the primary goal of education should be the intellectual development of the individual. With its accelerating importance in our society, science has become an increasingly important part of general knowledge. We believe that scientific education is best fostered as a part of general emphasis on intellectual activity and that the present need is for increased support of social sciences and humanities as well as the natural sciences.³

And a Working Group of the Indian Education Commission feels:

Our Five Year Plans show that we have accepted the principle that economic growth is possible only through the widespread use of science and technology in our economic and social life.⁴

In the last decade or so, there has been an increasing recognition of the need to develop a science based general education in schools. The Second and Third Five Year Plans gave a high priority to the

1. N. C. E. R. T. Report of the UNESCO Planning Mission, Delhi, 1964. p. 21.

2. N. C. E. R. T. Report of the Indian Parliamentary Scientific Committee, Delhi, 1965. p. 13.

3. Science. 1958. p. 857.

4. Discussion Paper on Major Problems in Secondary Education—Education Commission, 1965. p. 4.

expansion and improvement of science education. The Second Plan stressed that every secondary pupil should study general science as a compulsory subject, so that he might gain a basic quantum of scientific knowledge as a part of his general education. In addition, provision was made for science as an elective subject for those who wished to pursue higher studies. By the end of the Second Plan, a programme of general or elementary science was introduced in almost all schools but sufficient progress could not be achieved. Several difficulties like the lack of suitable textbooks, laboratories and equipment and also the dearth of adequately trained teachers, had to be faced. In the Third Plan it was, therefore, felt that in addition to providing facilities for teaching general science in all secondary schools and elective science to about 50 per cent of the secondary schools, other supporting measures have to be taken to consolidate and strengthen science teaching at the school level.

These supporting measures include improvement of curricula, their integration with earlier and later stages, preparation and production of textbooks and guide books and other reading materials, improved pre-service and in-service education of science teachers, and preparation and manufacture of right kind of equipment for the laboratories. It was also felt that to co-ordinate, guide and direct the entire programme of school science education as well as for the training of key personnel, a central organization should be developed. This led to the establishment of the Department of Science Education in the National Council of Educational Research and Training. It is hoped that the establishment of four regional colleges of education with a four-year integrated programme of teacher training for secondary school science teachers will set up new standards of training science teachers and help to solve the shortage of science teachers. A scheme of Science Talent Search was also introduced with a view to identifying promising talent at the secondary stage and providing opportunities for its development.

It has, however, to be acknowledged that the pace of progress has not been sufficiently fast for the implementation of the policy decisions of the Second and Third Five Year Plans. There is now a growing recognition of the need to improve and strengthen science teaching, since every educationist rightly feels that Science should be an integral part of general education. It is, therefore, very necessary to examine the various problems which affect science education at school level.

TRENDS IN SCIENCE EDUCATION

The rapid expansion of knowledge in different branches of science and its consequent impact on the daily life of people have set educationists of all the advanced countries to think about the position of science teaching in schools. As a result, the following trends have developed in modern science teaching :

1. Emphasis on scientific process and development of scientific attitude rather than mastery of accumulated facts;
2. Scrutiny and revision of the syllabi to remove much of the dead work and incorporation of modern ideas and concepts;
3. Due to the voluminous increase in known facts, all of which cannot be possibly taught in school situation, nor would be useful, attempts have been made to build courses around broad unifying and key concepts as the core, and omit much of descriptive matter. With an understanding of fundamental principles and concepts, descriptive material can easily be obtained from standard books.
4. The modern approach of teaching science is experimental. That is, science is learnt through personal or guided experiences or by "doing science" rather than from verbal or didactic methods. For getting the experience laboratories and equipment are essential.

In any programme of education four vital factors are involved. These are the pupil, the curriculum, equipment and physical facilities, and the teacher. We shall discuss these in turn to examine the problems involved and the ways of solving them.

PUPILS WHO HAVE TO BE TAUGHT

Fifty years ago real educational opportunities were available to the selected sectors of the community and to those groups which were economically and otherwise better off than others. With the aim of producing the personnel for white collar professions, the emphasis was laid on developing certain basic skills of reading, writing and communication. A fraction of these went for higher education in the real sense of the word. Science education was available to very few and the proportion of persons engaged in higher research in science and technology was still lower. With the advent of independence and the consequent goal of enforcing compulsory education to all school-going children up to 14 years of age, the number of pupils and schools have greatly increased and would continue to increase in the near future.

The rapid strides in education in India during the post-independence period can be well realised from the following figures :

TABLE 37
PROGRESS OF PRIMARY AND ELEMENTARY EDUCATION*

Year		No. of Schools	Enrolment	No. of Teachers
		LAKHS	LAKHS	LAKHS
Primary school	1947	1.73	1.41	4.06
Class (I to V)	1963	3.66	4.15	8.26
Middle school	1947	...	20.4	72,413
Classes (VI-VIII)	1963	...	81.6	4,20,744

*Elementary Teacher Education (NCERT) 1963-65, p. 13.

It can be noticed from the above statistics that the advancement in the middle school level has been proportionately more rapid than the primary stage. It will also be necessary to study the growth of education at the secondary stage. The following table gives the relevant information:

TABLE 38
ENROLMENT IN SECONDARY EDUCATION (IX-XI)*

Year	General Courses	Vocational Courses	Total
	LAKHS	LAKHS	LAKHS
1950-51	13.36	1.62	14.98
1960-61	31.39	4.22	35.81
1965-66	50.00	7.00	57.00

*Discussion Paper on Major Problems of Secondary Education (Education Commission) 1965, p. 16-17.

The enrolment in 1960-61 was two and a half times than what it was in 1950-51. By 1965-66 it has increased four times. It has been estimated that with the pressure resulting from the expansion at the elementary stage the "doubling period" for secondary

education (age group 14-17 years) has now become about 7 years. With the present trends the enrolment at the secondary stage may rise to 250 lakhs in general and 30 lakhs in vocational education by 1980-81. This will bring about 60 per cent of children of the age group of the 14-17 years to school as compared to about 18 per cent at the end of the Third Plan period.

This tremendous development in school education at the elementary and secondary level confronts us with the immense problem of recruiting a large army of well-trained teachers at all levels. Though the estimated increase in enrolment might be regarded as a sign of educational growth, the sheer number creates manifold problems like financing education, training the necessary number of teachers, and provision of equipment, building and other facilities. The expansion that has already taken place has led to a dilution of standards and setting up of a large number of sub-standard schools with insufficient accommodation, ill-trained or unqualified staff, and inadequate equipment. The dilution of standards at the institutional level leads to further expansion and has set in a vicious circle in deteriorating the quality of school education in recent years.

The Education Commission is faced with the problem of improving and maintaining the standard of school education, as it would not favour a fall in standard which the expansion of enrolment and the number of schools might bring forth. A policy decision has to be taken whether full-time secondary education for all should be provided or whether there should be selective admission. The general trend in progressive countries is to provide secondary education for all. But in view of the limited resources of the country and the need to maintain standards, it may not be possible to provide full-time secondary education for all. It may, however, be practicable to provide part-time academic and vocational courses to adolescent children.

Whatever be the policy decisions of the Education Commission, the Planning Commission and the Government of India, the enrolment will continue to grow. It is for the educator, the educational administrator and the classroom teacher to find out ways and means for educating this growing number properly and to maintain a proper standard.

THE CURRICULUM OBJECTIVES

With the broad goal of education to enable all citizens to develop their potentialities to the fullest extent and to contribute to the proper development of the nation, the aim should be not only to transmit traditional values and knowledge to the next generation, but also

to build a base of responsible citizens and trained manpower in terms of requirements of human resources for developing the economy. From these considerations, the objectives of teaching science at school level should be :

1. To teach science at all levels of school education as a means of individual growth of the child.

2. To develop in our children an understanding and use of science and the scientific method with a view to comprehending the world and live intelligently in a changing environment increasingly influenced by scientific development.

3. To develop in our future citizens an appreciation of science as a major human activity for the improvement of health and the living conditions and in the promotion of industry and agriculture.

4. To prepare a sound foundation of knowledge of science on which to build future higher or vocational education to supply the manpower needs of the developing technology in its various phases and levels.

5. To locate and nurture the talented pupils in science so that the best ones may be directed to creative and original activity to higher study and research and thus provide the nation with future scientists.

Keeping the above objectives in view, science education can be organised on a sound basis by the following curricular re-organisation:

(A) *Development of a Programme of Science Education for the whole school population throughout the country*

Science is at present taught as a compulsory subject up to the middle stage and in the form of general science or elective sciences in the higher secondary stage in almost States. But, there is a great diversity of the structure of secondary education from State to State and in the quantum of science taught in schools. A school programme of science education is not only necessary for scientific literacy and for developing a scientific outlook but also for providing the basic training for a future worker in an era of technology. Science should, therefore, be a core subject in schools with the same importance as is given to language and mathematics.

In a programme of universal compulsory education, not all may be potentially educable material for a sophisticated science course. It is, therefore, realised that science at the school level may be of two types: (1) a general course for all, and (2) an elective course.

The first course should aim at developing both a scientific literacy and a scientific attitude. It should be based on a knowledge of natural phenomena and should cultivate in the student world an appreciation of science as a major human activity of the present age. This course should be compulsory for all school students at least up to the pen-ultimate year of the secondary stage (Classes I to X). There may be provision of certain options at the level of Class XI. Much of the content of science of this course may be taught through demonstrations and simple individual experimentations for which equipment and facilities will be needed.

The second or the Elective Course has to be designed for those students who pursue higher studies in sciences at the degree level or technical and professional institutions. Here, science should be taught as separate disciplines in the last three years of the secondary stage with full practical work in laboratories. Adequate laboratory facilities and equipment are essential for each area of science.

The structure of school education should be so divided as to enable not only planning the quantum of science to be provided at each stage, but should also facilitate the movement and migration of students from one State to other without encountering difficulties. The pattern recommended by UNESCO Planning Mission fits in with the present of 11 years secondary schooling followed in a large number of States. According to this Mission the three stages of schooling should be:

(1) Stage I : Primary or elementary Classes I-V,

(2) Stage II : Junior High—Classes VI-VIII, and

(3) Stage III : Secondary—Classes IX-XI

(B) *The Development of a National Curriculum for Science*

The content of science that is being taught in our schools at present not only varies widely from State to State but is very much outdated. Science is developing at a terrific speed and many of the concepts and notions are undergoing profound changes. The content of teaching at the school level, however, has remained static. There is a wide gulf between what is being taught and what ought to be taught. Many common-place concepts and phenomena familiar in everyday do not find a place in our syllabi. The growing frontiers of science, their impacts on our lives and thinking and new approaches developed by educational research have made it essential that the contents of science for all levels should be modernised and deepened. Dr. Paul Kirkpatrick remarks:

In all speculations about improvement of education in India it is to be understood that each of the sixteen States operates and controls public education within its borders. The Ministry of Education of the Government of India provides counsel and certain kinds of assistance but has not power to command, and supplies little of the costs of education in the nation. Apparently, the States welcome the helpful relationship but would resist any proposal to centralize educational control. My own belief is that the nation's educational needs would be better served if the States were to give up some measure of their independence following the national need in matters where there is now duplication and multiplication of effort, and cooperating with each other where exchange of information and reciprocity of services could be arranged. As one experienced educator told me : 'The frogs in one well do not know that there are other frogs in other wells'.¹

The Indian Parliamentary and Scientific Committee also expressed :

We have considered this and from the point of view of science education in schools we feel that unless structure is uniform, stages at which science courses should be introduced with the gradual rising content of knowledge and practical experiments, cannot be easily visualised to apply to all parts of the country.²

With the structural similarity it would be easier to have a national curriculum with a broad uniformity in content also. It should have sufficient elasticity to suit local needs, resources and conditions prevalent there. There are five main advantages of having a national curriculum in science for the whole country. In the first place, a curriculum planning by a central agency will form the common basis of scientific knowledge throughout the country. So far curriculum making has been entrusted to the administrator and in some cases to a few professional workers in education. But the growing frontiers of science require a close collaboration with the scientists and specialists for the development of content programmes. Co-operation from scientists for school education has started flowing only in recent times. The broad facts of science will remain the same in all parts of the country or even in different countries of the world. To conserve energy, at least for some years to come, curriculum planning in science at a central level on a national basis will give a sound framework for the whole country. The States may adopt or adapt it to suit their local conditions.

1. N.C.E.R.T. *UNESCO Planning Commission's Report*. op. cit. p. 58.

2. *Report of Indian Parliamentary Scientific Committee*. p. 23.

A national curriculum will further enable a central agency to take up production of good modern textbooks and teachers' guides for which there is a genuine demand but there is acute shortage. Moreover, a national curriculum will enable the freedom of movement of pupils from one part of the country to the other. This is at present absent. It leads to many difficulties and results in wastage and stagnation. It will at the same time assure all parents that their children will have a sound education without missing any important experiences needed by the modern child. It may be further noted that a national curriculum will lead to the development of national norms for laboratory equipment and physical facilities needed for a good science programme. Finally, a national curriculum will help in laying down standards for teacher preparation and in-service programmes.

At present in an elective science programme, a student usually has to offer three subjects in the combination of Physics, Chemistry and Mathematics or Physics, Chemistry and Biology. In such a scheme, he either misses Biology or Mathematics. It is, however, necessary for a modern secondary student to have an adequate knowledge of Physics, Chemistry, Biology and Mathematics. A background of these four subjects is very necessary for understanding the scientific world of today.

Keeping in view the needs and resources of the country and the existing pattern of diversification after Class VIII and the need to provide for additional programme in depth and breadth for higher ability students, the following curriculum pattern is suggested :

- (1) *Stage I Class (I-V)* : Compulsory general science ;
- (2) *Stage II (Class VI-VIII)* : Compulsory science ;
- (3) *Stage III (a) IX-X* : Compulsory Core programme in science for " non-science" student.

XI : A course in one advanced branch of science ;

(b) *IX-XI* : Elective sciences—Physics/Chemistry/Biology/Mathematics ;

(c) *X-XI* : Additional knowledge in one branch for higher ability students only.

The development of national curriculum further involves certain specific tasks like :

1. Defining the specific objectives of teaching science at the various school stages ;
2. Indicating the coverage and depth of content in various sciences for the various subjects at different stages ;

3. Framing detailed syllabi for a general programme of science teaching for Classes I to VIII and for "non-science" students for secondary classes IX-XI ; and
4. Framing detailed syllabi for various elective sciences for the secondary stage and advanced courses for higher ability pupils.

Steps in above direction at the central level have already been initiated in the Department of Science Education of the National Council of Educational Research and Training.

(C) *Production of Textbooks and Allied Literature*

Closely interlinked with any curriculum development programme is the production of proper textbooks. A syllabus, however, good will not lead to desirable teaching, unless the spirit of the syllabus is adequately translated into the textbook. Besides reflecting the spirit of the syllabus, it has to give adequate coverage, required depth of content matter and the most modern approaches. It is observed, "Real good teachers are of very scarce commodity and, therefore, textbooks, demonstration apparatus and other teaching aids should be so organised as to make it possible for a teacher of average quality to impart proper education in content and quality."¹

A number of state governments have taken up the nationalisation of textbooks in a number of subjects not only at the primary but even at the middle stage. The N. C. E. R. T. has embarked on a programme of preparing model textbooks for the secondary level in science subjects in the close collaboration with university specialists.

The preparation of a good textbook requires not merely preparing a proper manuscript for publication but its actual trial in schools with a view to improving it from the response it receives and thus to give it a final shape. It requires a considerable expenditure in terms of manpower, energy and money. The task becomes easier and economic when a national syllabus is in use, so that at least for some years, the different States can make the fullest use of the materials prepared by a Central agency like the N. C. E. R. T. by getting the same translated in the regional languages.

Alongwith the textbooks, it is equally important to produce companion teachers' guides, helping the teacher to be clear about the concepts to understand the approach, and to know the contents more thoroughly than what a pupil is expected to know.

EQUIPMENT AND PHYSICAL FACILITIES

Sound science learning is gained from direct experiences by the individual from experiments and activities performed by him or

1. *Indian Parliamentary and Scientific Committee Report. op. cit. p. 50.*

demonstrated to him. This requires for every branch of science and for every level, certain physical facilities, apparatus and equipment. Where direct experiences are not possible in classroom situations, substitute experiences may be possible through other visual aids like models, charts, films, specimens, television, etc.

Up to the middle school level, the majority of schools do not have any laboratory worth the name. The States, however, stipulate the provision of laboratory facilities specifying the actual space requirements and lists of equipment (high and higher secondary schools teaching elective science). Still, the inadequacy of the required equipment and aids is too well-known. The maintenance and repair of apparatus are neglected. Secondly, the apparatus and equipment available are either too costly for schools or generally cheap, but inaccurate and sub-standard.

At present, theoretical instruction in science is being carried out in the majority of schools in class or lecture rooms, and a few routine practical experiments are being performed in laboratories where they exist. Such separate isolated theory and practical teaching is of little value in modern science teaching which aims experiencing science through investigations. The UNESCO Planning Mission recommends the provision of one combined study room (lecture-cum-laboratory for classes VI to VIII and separate study rooms for chemistry, physics and biology for the senior classes IX to XI). Each study room should have a work place for teacher with a demonstration table on a raised platform, blackboard, projectors, screen and devices to hang diagrams and charts. The table should have ample shelf accommodation, sink, water and if possible gas and electric supply. According to the subject requirement the teacher should have other specific things e.g., fume chambers for chemistry. The work table for the pupils should be simple—sturdy two seat tables with comfortable wooden chairs attached. Sinks, running water, gas or electricity should be available according to the subject requirement.

Alongwith each study-room there should be a store room for the laboratory assistant with ample cupboard space for apparatus, equipment, glassware, preparation and assembly table for preparing materials and experiments for the lessons.

The provision of apparatus and equipment for school science laboratories is one of the most urgent tasks for further development of science education. The Government is making available financial grants to the secondary schools through State Governments. But the Schools have to determine the priorities, quantities and quality of the articles they want to purchase. Money is often provided. But due to absence of suitable guidance either right things are not purchased or the money is blocked. The Committee on Plan Projects has published a useful list of equipment for teaching science subjects

at the secondary schools. This indeed is a valuable guide. It will also be necessary to indicate the approximate itemwise prices and the sources from which they may be purchased. With the framing of new syllabi for different subjects and different stages, it is necessary to revise the inventories and lists in conformity with the modern experimental approach of teaching.

All teaching aids may be divided in two big groups : (1) the equipment produced by industry, and (2) those that may be improvised or manufactured by the teacher in the school with or without the help of the pupils. Though the bulk of teaching aids have to be manufactured by the industry and purchased for the school, nevertheless there exists a wide opportunity to teach much effective science through improvised apparatus. Improvisation must be looked as an educative process of learning and understanding concepts of science and not as a substitute for traditionally manufactured apparatus. For initiating the teacher to improvisation, it will be necessary to organise simple workshops for the purpose. This need not be very elaborate and sophisticated but must include hand tools, soldering and carpentry equipment, and simple machines.

An important aspect of the school science equipment is its effective and functional use. Even when an equipment is available, it is at times found that teachers do not use it because they may either not know how it functions or may be afraid of breaking or damaging it. It is no wonder, therefore, that a major portion of equipments remain unlocked in cupboard. This is a colossal wastage of money. Secondly, many schools do not pay sufficient attention to the maintenance of apparatus. They are kept open and remain exposed to dust, air or corrosion by dampness, etc. It will be desirable to keep them in cases or inside cupboards etc. Sometimes apparatus after use are not cleaned before packing, leading to subsequent faults.

Thirdly, effective use of apparatus and equipment is prevented when a minor fault or defect is found but the teacher is unable to rectify it. This may be due to ignorance, lack of facilities, or disinclination on the part of the teacher. In any case the apparatus remains locked up and is not in use.

So the problem is not only lack of sufficient apparatus and equipment but also not putting to optimum use the apparatus that are available. Thus the main tasks in the area of equipment both apparatus and audio-visual aids appear to be :

1. Working out norms for providing teaching equipment to schools for different levels and subjects consistent with the syllabi and modern experimental approach to teaching.
2. Preparing standard inventories on the basis of the norms for supply to the schools together with essential specifications,

approximate market price and from where they may be obtained.

3. Exploring areas of teaching where improvisation of apparatus and equipment is possible by the teacher and the pupils and publish such materials for wide publicity. The emphasis on improvisation should be not as a substitute for standard manufactured equipment but as a means to science learning.
4. Organising short-term training courses especially for primary and middle school teachers in handling, care and maintenance of apparatus and equipment.
5. Standardizing existing instruments, apparatus, models, charts and other teaching equipment manufactured by the industry with a view to increase their instructional value and to reject the unsuitable ones.
6. Adapting foreign made equipment for Indian schools with indigenous raw materials and through technical skills available in the country.
7. Designing and manufacturing prototypes of new equipments, models and kits which may have high instructional value and are economic and trying them out in experimental schools.
8. Preparing standard charts and diagrams of scientific phenomena and processes which are educationally useful.
9. Preparing annotated bibliography of films, filmstrips, slides and other aids produced commercially, indicating subject, topic and grade level suited and the source from where these could be obtained.
10. Surveying and studying the existing situation of school science laboratories and laying down suitable norms for study room-cum-laboratory, furniture and fitting for various subjects and grades.

THE TEACHER AND HIS TRAINING

Though a good curriculum, better textbooks and proper and adequate teaching equipment are all necessary conditions for good teaching, the pivot around which the educational system revolves is the teacher. He occupies a place second only in importance to the pupil. The problems of educational philosophy are brought sharply in focus in the field of teacher education. We cannot decide what kind of teachers we want and how these teachers are to be educated until we

know what kind of schools we want and what these schools are to accomplish. No reform can ever take place unless the required number of teachers are available, their quality is good and they believe in the programme they have to implement. The preparation and training of science teacher presents several problems.

The Problem of Supply

That there is a dearth of science teachers all over the country is too well-known. The supply of science teachers at the secondary stage is tied with the supply of science graduates from the universities and the supply of science teachers at the elementary classes with the facilities available for teaching elective science at the secondary stage. The estimates of additional requirement in the Fourth Five Year Plan for increased enrolment and replacement of retired staff is astronomical.

For the primary stage (Classes I to V) the estimate of the Education Commission of additional annual requirement of teachers is 1,40,000. It has to be borne in mind that there is no specialized subject teaching at this stage, so that, in order to have any effective science teaching at this stage all the prospective teachers should have at least the necessary minimum science background. The total output of secondary school leavers in 1964-65 is about 10 lakhs, of which those with elective science may be estimated to be about 4-5 lakhs. The enrolment in the entire secondary stage is expected to be doubled by the end of the Fourth Plan period.

For the middle stage (Classes VI-VIII) the overall additional number of teachers required per annum is expected to be 82,000 for all subjects. It may be assumed that the number for science and mathematics teaching may be approximately 5,000 and 10,000 on the basis of the time-table load. Though at present teaching is done in most states by undergraduates at this level, it is increasingly being felt that these classes have to be taught by graduate teachers if the modern curriculum is to be effectively implemented.

For the secondary school level, the annual additional requirement of science teachers in Fourth Plan period is estimated to be 11,000 as against the present supply of 4,000—5,000 per annum. The output of B.Sc.'s and M.Sc.'s in 1964-65 were 32,000 and 6,000 respectively. It is, therefore, important to expand science teaching facilities considerably both at the university and secondary stages so as to ensure a steady supply of personnel. As a good science graduate or a matriculate in science, is in great demand with a more lucrative wage scale elsewhere, any improvement in the supply position of science teachers must realistically face the necessity of improving the teachers' salary scale substantially.

and (4) acquire the skills of such practical work as is associated with his subject and organise extra curricular activities.

The Existing Position of Teacher Training in Science at the Elementary Level

As many as 1,350 elementary training institutes with various nomenclature prepare teachers of elementary and middle schools in this country. They conduct a two or one year programme for pupil teachers with the middle or secondary schooling background. The recent trend is to prescribe a two-year course of teacher education after high school/higher secondary education.

But even the two-year course is not what it should be. Science is taught as a separate subject. An analysis of the syllabi of different States indicates that the material is completely isolated and disorganised. Methods of teaching science usually form a fraction of the "General methods of teaching" with an emphasis on general methods applicable to all subjects. A major defect in the curriculum is that the content and methods are not integrated so that in actual practice fine experimental and practical methods are given to the trainees through lectures, and true to the training received, the teacher starts teaching in the verbal methods he was exposed to during training.

It is also not obligatory for every trainee to learn science during his training. Laboratory facilities being generally poor or even non-existent, there is very little emphasis on learning science through practical experience.

A sample survey made recently by the Department of Science Education, N. C. E. R. T., shows that only 65 per cent of the teacher educators of science have a B.Sc., B.Ed., or equivalent degree and two per cent have M.Sc., B.Ed., or equivalent degree, while as many as 11 per cent have not studied science at all. Ninety-three per cent of these teachers have never taught at the elementary level and thus have not much practical acquaintance with the needs and interests of the elementary school child. Fifty-nine per cent of these institutions have no Science laboratories. The most common teaching aids available are charts (100 per cent), models (88 per cent) and biological specimens (56 per cent). Other aids like slide or filmstrip projector, film projector, epidiascope or tape recorder etc., are available in 8 to 11 per cent of these institutions.

There is an urgent need for reform in the training of elementary science teachers on following lines :

1. The preservice training course for the future elementary science teacher should be of two years' duration with the minimum entrance qualification of high school certificate.

2. The training course must include as obligatory :

- (a) General education in mathematics and science at least equal to the elective science course of the secondary level in theory and practical taught as a combined content-*cum*-methodology course.
 - (b) Relevant pedagogical course for teaching at the elementary level.
 - (c) Thorough study of the syllabus that the teacher is expected to teach by analysis of the contents for concepts and activities to clarify the understandings.
 - (d) Sufficient number of observation lessons, supervised practice lessons and criticism lessons in the subject.
 - (e) Sufficient workshop practice and training so as to develop the skill for improvisation of apparatus and equipment from common place things and in museology etc.
3. All institutes must be adequately staffed with two trained graduates, one having a physical science background and the other having a biological science background.
 4. All teacher educators of science should teach for at least a few periods a week in elementary classes of practising school.
 5. All institutes must be provided with a laboratory sufficient apparatus and demonstration equipment and a suitable workshop with necessary hand and machine tools.

Existing Position of Training for the Secondary School Science Teachers

One-year training colleges.—The main agencies of teacher training for the secondary level are the 275 training colleges functioning as independent colleges or departments of education under the universities or under the control of the State Departments of Education with a total enrolment of about 28,000. These provide a one-year course in pedagogy leading to the Bachelor's degree in Education. About 10 per cent of the enrolment consists of science graduates.

Though the curriculum is not uniform, the broad pattern is almost the same throughout the country. The theoretical training is given in usually subjects like educational psychology, history of education, general principles of education, comparative education, methods of teaching various school subjects and health education. As a rule every trainee is supposed to study methods of teaching of two subjects and is required to teach a varying number of class-lessons in two subjects as a part of their practical training. The number of such lessons varies widely and may be anything between 20 to 60.

The syllabi of one-year training colleges do not include any subject-matter content, the assumption being that the knowledge gained in the B. Sc. degree is sufficient for a trainee. It may be further noted that nearly half the training colleges have no laboratory and those, among the rest that have, are not properly equipped. About one half of the science lecturers have M.Sc. degree and the rest are B.Sc. Very few lecturers give more than one or two demonstration lessons per year. For about 75 per cent of the colleges the only type of practical work in science is gardening, maintenance of the museums and sometimes organization of science clubs. About 15 per cent of the colleges have workshop practice for the trainees. The facilities of library and journals and periodicals on Science education are scanty. A considerable proportion of the training college staff has no experience of teaching in a secondary school. The teaching staff has hardly any contact with the faculties of degree colleges or university department and function in splendid isolation.

The number of science graduates for training usually ranges from 8 to 10 per cent of the total enrolment. The training provided to all is broadly similar irrespective of academic background and the future responsibilities of the teacher. The curriculum is heavily loaded with descriptive material of a general kind and even the methods of teaching are taught in a general way and not concretely. The pattern of training does not take into account the peculiarities of the subjects, which the teacher is going to teach in schools. The time devoted to the study of methods of teaching is hardly 5 to 10 per cent of the total training time. There is no intimate relationship of the method of teaching with the course content in the secondary school. The need for reform of one-year training colleges for the secondary level is thus urgent. As the UNESCO Planning Mission's Report remarks, "The existing system of training teachers through one-year colleges was acceptable on the whole, and it should continue at least for another decade". However, there is a great need to revise and reorganise the curriculum of these colleges. They should all have a broad structural pattern with certain minor adjustments to suit the local conditions prevalent in any state. The framework may consist of the following main parts :

A. General Education consisting of :

- (i) Theory of education and school organization;
- (ii) Educational Psychology and Sociology ;
- (iii) Health education and physical education (30 per cent of time).

B. Professional education consisting of :

- (i) Methodology of subject teaching of two subjects ;
- (ii) Fundamentals of pupil's knowledge from methodology point of view ;

(iii) Acquaintance with new achievements in the subject.

C. *Practical work consisting of 30 per cent of time :*

- (i) Laboratory work in techniques and method of teaching a particular science ;
- (ii) Familiarity with concrete use of school syllabus—Organization and method of conducting these lessons and practical work ;
- (iii) Workshop work for preparing visual aids and simple devices to be used in class-room teaching.

D. *Practice teaching in two subjects and internship (20 per cent of time) :*

The actual class-room teaching should consist of (i) observation of 3-4 demonstration lessons given by the training college staff and experienced high school teachers in the subjects ; (ii) at least 30 supervised practice teaching lessons in each of the two subjects chosen ; (iii) at least 3-4 criticism lessons in the presence of fellow trainees and supervisor ; and (iv) a two-week internship as a regular teacher under an experienced teacher in a real school situation (20 per cent of time).

A training college with a good enrolment of science graduates must have adequate laboratories and equipment for handling different branches of science upto the higher secondary level and a workshop with necessary tools and equipment. Those with a smaller intake of science trainees should have at least two lecturers—one for physical and the other for biological sciences. Staff must be at least Second Class M.Sc. with B.Ed. or M.Ed. It is preferable to have colleges with large enrolments so that a qualified staff for all the sciences can be appointed. The science practice teaching lessons must never be supervised by non-science staff.

Four-Year Regional Colleges Education.—The four-year Regional Colleges of Education have set a radically new pattern of teacher education. It is an important step in the preparation of science teachers. In these colleges, a four-year integrated course of content-cum-method of teaching science is taught after the Higher Secondary Certificate leading to the B.Sc.B.Ed. degree. The colleges have highly qualified staff with well-equipped laboratories, libraries and workshops and are residential in nature. The residential nature gives not only more time for academic studies and corporate life but true emotional integration of the trainees and a professional outlook. Each college has a demonstration multipurpose school. The UNESECO Planning Mission has expressed :

We are sure that this form of teachers' training is rather effective and is of great importance for the future. We are convinced of this in the light of experience of training teachers in other countries of the world and in the U.S.S.R. It is worthwhile

mentioning the fact that if this kind of training is followed, the preparation of a prospective teacher will be going on continuously in the course of many years and this is the main advantage of a new system of teacher training.¹

The same report further remarks :

Although the nascent regional colleges are indeed a hopeful feature in the educational science, their problems and limitations must not be overlooked. Even when working at full capacity, they will not turn out more than a small fraction of the needed supply of science teachers. Their full potential usefulness will not be realized until their operation as a pilot plant and show-case has been appreciated throughout the states and their better features copied.

The Regional College Programme needs recognition of the fact that graduates of these colleges should get the opportunity to increase their subject-matter competency by admission to the M.Sc. degree of university. It may be realised that the regional colleges are a progressive feature in teacher education and can become the major means of training teachers. The UNESCO Mission have recommended that their number be increased and have made following suggestions which are worth serious consideration and adoption² :

1. It is desirable to have an enrolment of not less than, 1,000 which would give an opportunity to equip the laboratories well and cheaply and utilise them more efficiently. It would also enable to staff the college with specialists in all major fields of science.
2. It is desirable to have a post-graduate degree of "Master of Science Education" not only to provide opening for the graduates but also to train prospective training college staff.
3. It is necessary to institute a combination of written and oral examinations and a systematic continuous evaluation of a trainee.
4. There should be up-to-date teaching aids and equipments.
5. Library should be strengthened and the students should have access to standard educational periodicals and journals.
6. The syllabi should be continuously assessed and revised in the light of experience.

Inservice Education of Science Teachers.—Even with the best of preservice training, a science teacher will need periodic in-service

1. N.C.E.R.T. Report of UNESCO Planning Mission (1964) p. 111.

2. Ibid., p. 189.

training. He becomes out-of-date in content knowledge within a few years of his graduation and has to be refreshed with modern advances in his subject and with new interpretations of concepts in the light of new knowledge. He has also to be familiarized with the new techniques and approaches of teaching that are constantly developing in the field of science teaching.

Inservice education means training or instruction without loss of time from one's job, or at least from the salaried time. It may be conveyed through refresher courses in vacations, occasional seminars or limited periods of personalized instruction on an organized basis and even by individual consultation.

Inservice training or refresher courses may be of varying duration and with different specific objectives like :

1. Giving depth in knowledge in an academic field to upgrade and up-to-date knowledge in the subject ;
2. Familiarising with the modern approaches and techniques developed for teaching a subject ;
3. Training in developing and organizing co-curricular and science club activities ;
4. Training in workshop skills, improvisation of equipment or care and repair of instruments ;
5. Teaching content in an area not learnt by the teacher in his college or school course but is needed for his present job (Remedial teaching) ;
6. Training in specific laboratory skills like glassblowing, microscopic work, museomology, working electric and electronic equipment photography, mounting specimens etc.
7. Training for some specific project or programme for educational or curricular reform.

In the field of inservice education for science teachers not much was achieved till recently. The need was recognised when the Extension Service Departments were set up in selected training colleges under the Directorate of Extension Programmes for Secondary Education in the Second Five-Year Plan and extended in the Third Five Year Plan. The number of such units or centres is above one hundred today. The magnitude of the number of schools that a centre/unit has to cover and the number of school subjects that it has to cater, has made it almost impossible for it to pay sufficient attention to science teaching.

The extension programmes of these centres/units aim to render assistance to the practising teacher through sponsoring seminars, workshops, lectures, library service, science club activity, evaluation programmes, preparation of visual aids and occasionally courses of short duration. But, since all curricular subjects are involved, the share of science is only a fraction of the total effort.

Summer Institutes.—Since 1963 summer, a programme of Summer Institutes in Physics, Chemistry, Biology, and Mathematics has been launched jointly by the NCERT and U. G. C. in collaboration with the U. S. Agency for International Development. The aim of these institutes is to acquaint the secondary school science teacher with modern curricular developments in the respective science and let him go through the whole programme in about a month's duration. He is not only made aware of the new philosophy, view-points and curricular approaches but by going through the instructional process himself, he learns the technique of teaching effectively. The process is like a conversion of faith and belief in the ability to do it himself.

The curricular base of these Summer Institutes has been the materials developed by various groups in U. S. A. These are: (1) Physics—Physical Science Study Committee; (2) Chemistry—Chemical Educational Materials Study; (3) Biology—Biological Science Curricular Study; and (4) Mathematics—School Mathematics Study Group.

Through the active leadership of the U. G. C., these Institutes were held in the various universities and colleges and the staff from these places acted as the resource personnel. These approaches required considerable experimental work throughout for which all laboratory facilities were available. Two American experts (one professor and an experienced high school teacher) were available in each institute as consultants.

The growth of these institutes may be estimated from the following table :

TABLE 39
GROWTH OF SUMMER INSTITUTES*

Year	No. of Institutes	No. of participants
1963	4	160
1964	44 (16)	2200
1965	94 (28)	4,700
1966	Expected 150 (50)	...
1969	„ 280 (180)	14,000

*School Science Vol. 4 No. 2 June 1965, p. 172.

N.B. The figures in the brackets refer to Institutes for college teachers.

It is expected that by 1969 about a third of all existing secondary science teachers will be oriented through these courses.

Correspondence and Evening Courses.—The UNESCO Planning Mission remarks, "Further development of science and mathematics education and considerable expansion of the network of schools planned for the immediate future requires a considerable increase in the number of experienced teachers. With these conditions in mind, we find it rather expedient to suggest for consideration by the Indian Government to the Project of training teachers through correspondence education and Inservice Training Centres."¹

The experience of U. S. S. R. has proved that not only such courses have enabled them to remove the backlog of untrained teachers but it has been found useful to continue and expand these facilities as a permanent feature of the programme of training teachers. At the present time, there are two full-time correspondence institutes, 219 correspondence and 74 evening departments at the pedagogical institutes and universities in that country. It has also been experienced that the standard of the teachers who graduate from the Correspondence and Evening departments is almost equal to that of full-time students.

The organization and development of evening and correspondence courses are worth exploring. The Central Institute of Education, Delhi, has already launched such a scheme for teacher education after a pioneering effort by Delhi University for general education for the Bachelor's Degree.

There is scope for developing correspondence and evening courses for following three types of trainees :

1. *Untrained B.Sc. teachers.*—The syllabus should be same as for one year B.Ed. Course to be covered in two years.
2. *Teachers of humanities with B.A. who wish to become science teachers.*—Training syllabi may correspond to 4-year Regional College programme but as they are already graduates it may be possible to prune the course to a period of 3 years.
3. *Undergraduates.*—The syllabi should be that of the 4-year Regional College and the period of studies to be for 5 years.

The correspondence and evening courses should ensure that the syllabi and standards of examination are essentially the same as for the full time courses, though the organisation of training and methods of teaching might be different. For correspondence courses there must be a contact period of 6 to 8 weeks per year in a training college or

1. Report of UNESCO Planning Mission, 1964, p. 133.

university under the guidance of teachers and the remaining time should be left to the student. For evening courses there may be 12-16 hours of lecture per week (3-4 days a week for four periods each).

The aim of those courses should be to develop independent work in mastering course content with the help and guidance of the teacher educator who should supply all review of literature and explain ways and means of independent work. Emphasis and due attention should be paid to the various tests to be done by students at home between the contact session, and some incentives should be provided to the students of such courses in the form of additional leave with pay and expenses to meet travel costs and residence costs during contact sessions. There must be a planned internship programme according to the background and needs of the student.

Refresher Courses.—Short refresher courses to meet other specific requirements can be organised by training colleges and university departments on a planned basis. Much can be done by the Extension Service Departments, and the proposed State Institutes of Education and State Institutes of Science in the various States. It may be noted that some of the training colleges and state institutes have started a ten-week refresher course for science teachers. These aim at giving them a knowledge of subject-matter and modern developments in science.

ADMINISTRATION AND ACADEMIC ORGANISATION FOR THE IMPROVEMENT OF SCIENCE TEACHINGS

The organization of an effective programme of science teaching at school involves the planning of programmes and their execution. At the central level, the Department of Science Education of the N.C.E.R.T. has been created to organise broad curricular programmes, initiate pilot schemes for improvement of science teaching and equipment, and conduct investigations on specific area of science teaching. But to improve teaching at the school level, there is need for a suitable machinery at the State level. It should implement the plans of action at the school level for the right supervision of science education.

State Institutes of Education.—During the third plan period, the Government of India have assisted the state governments to establish the State Institutes of Education whose broad functions are to co-ordinate and generally play the leadership role at the State Level for curriculum improvement and in-service training of teachers. These institutes will cater for the whole field of elementary educational programme. Science education will form a part of their activities. They are to work in close collaboration with the Central Agency, the N.C.E.R.T.

State Institutes of Science Education.—In 1956, the Ministry of Education launched a scheme to establish a State Institute of Science in each State for planning and implementing improved programmes in all aspects of science teaching at state level in collaboration with the Department of Science Education. So far nine States have formed such institutes or the nucleus of the institute and it is hoped that by the first year of the Fourth Plan all States will have a State Institute of Science.

The State Institutes of Science are to function mainly as centres of research for science curriculum, in-service training of science teachers and teacher educators, improvement of instructional aid, and of translation and dissemination of science textbooks, guide books and allied literature in regional languages.

A conference of the Directors of the State Institutes of Science Education, officers of the Department of Science Education, and the Ministry of Education, UNESCO, USAID and UNICEF experts working in the N.C.E.R.T. was held in December 1965 for developing programmes for the State Institutes. A programme of survey, curricular work and in-service training was drawn up.

Science Consultants' Scheme.—The scheme of Science consultants in various States was drawn during the Third Five Year Plan and it is in operation in twelve States. A Science consultant works in a small area with a selected member of school under his jurisdiction. Except in three States, these are elementary schools. He gives assistance to teachers in the form of supervision of lessons, improvisation of apparatus, selection of equipment and apparatus and also produces some guidance literature for teachers.

It is necessary to expand and strengthen the scheme of science consultants considerably so that they may form an effective link between planning and execution. It is important to realise that one consultant for a State is hardly adequate. There should be a Science Consultant at State level of the rank of a Deputy Director, assisted by an assistant consultant in each district. The State Science Consultant would be the academic leader for advising science teachers on their problems and for organising programmes for orienting teachers with new developments. He is to be the link between teachers, State Institutes of Science and the Department of Science Education. He would not only implement the schemes emanating from the centre, but will also adapt them to suit local needs and resource of the State. The assistant consultant should not only give specific assistance to classroom teachers but should also hold seminars and workshops for producing suitable teaching materials according to local needs. It is he who would make teachers believe in the programmes that are to be implemented.

23 PROFESSIONAL PREPARATION OF TEACHER EDUCATORS AND EDUCATIONAL ADMINISTRATORS

S. N. Mukerji

BACKGROUND

Teacher Educators

The training of school teachers received the attention of government since the beginning of the last century. As early as 1824, the Bombay Native Education Society established a training class for primary teachers¹ and the first batch of twenty-five trained students were sent out in 1826 to take charge of government primary schools in district towns of Konkan, Gujarat and the Deccan. The Committee of Public Instruction, Madras, also established a normal school in Madras in 1826.² Gradually normal schools were established in different parts of the country. These aimed at training teachers for elementary schools.

In 1886, the Madras Normal School was raised to the status of a college and was affiliated to the Madras University. This is the first secondary training college of this country. In 1901-02, there were six teacher training institutions for graduates, fifty training schools for undergraduates, and 179 normal schools for primary teachers in the country.³

The teacher educators of these institutions were certainly not trained. There were two main reasons. In the first place, the idea of training teachers had just originated and as such it was impossible to secure either a trained teacher or a teacher educator. In the second place, the training of teachers had a special connotation in those days. It meant 'general education' rather than instruction in the art and science of teaching. This 'general education' was imparted by the teaching staff of arts and science college. For example, the Normal Class attached to the Elphinstone Institute, Bombay, was superintended by the Elphinstone Professors.⁴

In fact, till the end of the last century, it was generally believed that a person with good 'general education' needed no professional

1. Government of Bombay. *A Review of Education in Bombay State, 1855-1955*. Bombay Government Printing, 1958. P. 289.

2. S. N. Mukerji. *History of Education (Modern Period)*. Baroda Acharya Book Depot, 1961. P. 64.

3. *Ibid.* Pp. 301-02.

4. J. A. Richey. *Selections from Educational Records, Part II, 1840-59*. Calcutta Government Printing, 1922. P. 164.

training to become a competent teacher. This view was held by eminent officials too. For example, Sir Alexander Grant of Bombay declared that "the University was the great normal school for Assistant High school Masters".¹ Even as late as 1882 when the Indian Education Commission was appointed, there was a powerful school of thought which held that secondary teachers needed no professional training; that the best way to teach a man to teach arithmetic was to teach his arithmetic; that if he knew arithmetic and wanted to have additional qualifications, he should be taught algebra rather than the methods of teaching arithmetic; that enthusiasm on the part of a teacher coupled with a natural aptitude or appropriate reading would give all the necessary insight into the methods of teaching and that a year or two of service under an experienced headmaster would be more advantageous than study at a normal school.²

The Hunter Commission, however, considered that a knowledge of 'principles and practice of teaching' was necessary for all teachers under training. This was accepted by all the Provincial Governments and 'Pedagogy' found a place in the teacher education programme. In the early stages, this was taught by experienced high school teachers or school inspectors and even by lecturers of philosophy of arts colleges. Gradually, the products of secondary teachers' colleges were available and they were employed in teacher training institutions of different level. But the principals of secondary training colleges were I. E. S. officers with no pedagogical qualifications.

A new direction to teacher education programmes was given by the Sadler Commission Report. One of its main results was the introduction of the M.Ed. and Ph.D. courses in Indian universities. This step proved very helpful in improving the qualifications of teacher educators, as persons with Master's degree in Education were available after 1940. Right from the beginning this degree specifically aims at preparing educational leaders including teacher educators. In 1949, as many as 16 universities were conducting the M.Ed. course. But only the Delhi University provided 'Teacher Education' as a special field.³

The Sadler Commission's Report also helped the preparation of teacher educators indirectly. It attracted the attention of a batch of promising youngmen of the country. They went abroad to learn about new developments in educational philosophy, psychology, practices and methods. On their return they were employed either as educational inspectors or training college lecturers.

1. *Report of the D. P. I. Bombay*, 1966-67. P. 33.

2. *Report of the Indian Education Commission*. Pp. 235-36.

3. *The Indian Association of Teacher Educators. The Proceedings of the First Conference of Training Colleges in India*. Baroda, 1950. P. 49.

The advent of Basic Education also gave a new direction in the preparation of teacher educators and educational administrators for the elementary stage. There are as many as 24 basic training colleges at post-graduate level. They have been specially set up to train teacher educators for elementary teacher training institutions and administrators for the elementary stage.

Educational Administrators

The concept of setting up a Department of Education with its own officers is of recent origin. In the early years of the Nineteenth Century, the administration of education was entrusted to revenue officers. In their letter to the Governor in Council of Fort St. George, dated 16th April, 1828, the Court of Directors directed that 'A general superintendence over schools may be exercised at all times by the collectors'.¹ This was the condition not only in India but in other parts of the world too.

A definite machinery for inspecting schools was set up in Bengal in 1844; when an Inspector of Schools and Colleges for the Lower Regulation Provinces (Bengal and Bihar) was appointed.² The Board of Education, Bombay, also drew rules and regulations for its educational establishments in 1845, when the whole presidency was divided into four divisions, to each of which an officer called 'superintendent' was appointed, who had the supreme control, subject to the Board of all the Schools within it.³

The Educational Despatch of 1854 created a Department of Education in every province with a Director of Public Instruction as its head to be helped by an inspectorate of schools at different levels. But when these posts were created, the Court of Directors held that these should be filled by I.C.S. officers. The Directors cannot be blamed for this point of view because the training in educational administration was unknown in those days. But their idea did not succeed, since I. C. S. officers were not interested in Education Departments. Consequently, the posts of D.P.I. were filled, occasionally by the direct appointment of a distinguished scholar, but more generally by promoting the senior-most officers of the Department.

The Despatch of 1854 also held that educational administrators below the D. P. I., i.e., Deputy and Assistant Directors, and District and Divisional Inspectors should be selected from the I. C. S.⁴ For a time, even a proposal to create an 'Educational Branch' of the Civil

1. A. N. Basu, ed. *Indian Education in Parliamentary Papers, Part I.* Bombay, Asia Publishing House, 1952.

2. J. A. Richey. *Op. cit.* Pp. 66-67.

3. *Ibid.* P. 159.

4. Bombay Government. *Report of the D. P. I., 1866-67. Appendix I.*

Service seems to have been under consideration. But both the ideas had to be given up, as the job of an inspector of schools did not prove attractive to young civil servants. Some of them did join as inspectors, but they did not continue in the Education Department for a long period. Under the circumstances, persons with 'good general education' were employed as inspectors. Professional training was neither demanded nor considered necessary in those days.

In 1896, the Indian Educational Service was organised. Originally, it was almost exclusively monopolized by Europeans and all the key-posts in the Department were generally held by persons belonging to that Service. The majority of officers had sound academic background, and hardly a few had professional training. In the initial stage of their services, they were attached to a senior officer for a period of two or three months. When this apprenticeship was over, they were given independent charge. The I. E. S. officers dominated all Departmental policies between 1896-97 and 1921-22. The influence began to wane only after Indianisation of its personnel was carried out and Education was transferred to the control of Indian ministries.

Thus the majority of D. P. I's and Senior Officers of the Education Department had no diploma or degree in education and several of them were blissfully ignorant of the basic principles of educational administration. And it was preposterous to think of the training of educational administrators in the nineteenth century when the need for even training secondary teachers was being debated.

By the second decade of the present century, it was being appreciated that educational administrators should preferably have a degree or diploma in education. In the meanwhile, the products of secondary training colleges were available. They were appointed in Provincial and Subordinate Services. They did acquire a nodding knowledge of educational administration, since the B.T. or the L.T. course does include a paper on 'Principles of School Management'. But this programme is not adequate enough to meet the requirements of an educational administrator. The position is worse at the primary stage, where a certain percentage of the inspectorate are given to senior primary school teachers on grounds of merit and seniority.

The introduction of the M.Ed. course has, however, proved helpful. In 1949, as many as eight universities introduced 'Educational Administration' as a special field in their M.Ed. course. Many of the administrative officers do receive their pedagogical training in foreign countries, but not necessarily in educational administration.

PRESENT POSITION

Teacher Education

There are over 2,000 teacher education institutions in the country with an average of at least ten members on their teaching staff. These

institutions can be broadly classified under four heads : (a) secondary, (b) elementary, (c) pre-primary, and (d) special branches.

A study of the staff of secondary training colleges shows that it is inadequately prepared for its task. A study has revealed that 40 per cent of the staff of these institutions have only a B.A. degree in addition to the B.Ed., 58 per cent held a Master's degree in education or in an academic subject ; and only 2 per cent have a doctorate degree.¹

The situation is worse at the elementary stage. The majority of teacher educators of this stage are mere graduates with a bachelor's degree in education. Very rarely one may find amongst them an individual with a master's degree. But this is not enough. A few proportion of these teacher educators of this stage do not feel at home in their work. They find themselves shaky and lack in confidence. But they cannot be blamed, since they are products of secondary teachers' colleges and are B.Eds. This degree has been designed to meet the requirements of secondary education and does not cater to the needs of elementary education at all.²

The same is the situation in pre-primary teacher training institutions too. There are sixty such institutions in the country.³ They are again staffed mostly by B.Eds. and not by specialists of Childhood Education. It is no wonder, therefore, that they lay more stress on formal instruction rather than on equipping the child for compulsory elementary education.

The special fields cover a wide range of subjects like physical education, guidance and counselling, science education, English teaching, Hindi teaching, audio-visual instruction, craft education and other allied fields. The majority of teacher educators of these branches are no doubt well-up in their special branches, but they need not necessarily have the pedagogical background. For example, the science institutes are mostly staffed by scholars of physics or chemistry but not by pedagogical scientists. Similarly, the teacher educators of Hindi training colleges are generally well-versed in Hindi, but they may or may not have even a nodding acquaintance of the art of teaching.

Educational Administrators

The present administrative set-up of education is that in all States there is a Department of Education working under the control of a Minister who has a Secretary to assist him at the secretariat level

1. *Report of the Education Commission*. 1964-65. P. 77.

2. N. C. E. R. T. *Elementary Teacher Education*. New Delhi, 1965. Pp. 150-51.

3. I. A. T. E. *Report of the Eighth Conference*. Delhi, 1965. p. 97.

and a Director of Education as the executive head of the Department responsible for offering technical advice to the Minister in all educational matters and for carrying out the policy of the Department. The Director is further helped by various deputy/assistant directors.

The Education Minister cannot be expected to be an educational expert by training or profession. The Education Secretary is generally an I.A.S. In addition to education, he may have several other portfolios under his care. He has neither the professional training nor the experience of the Department of Education, when he is saddled with the responsibility of handling this nation-building service.

The Director of Education is generally the senior-most officer of the Department. The usual practice is to promote the senior-most principal of the government college to this post. When this institution happens to be a training college, the D. E. has the professional training. But if he is the head of an arts or science college, he has no special educational qualifications. There is also a growing tendency to appoint an I.A.S. to this post. Since he has no experience of the Department, he takes some time to understand what is 'Education'. The deputy/assistant directors are generally trained. But they lack in professional qualifications if they are promoted from arts or science colleges.

Below these officers are the educational inspectors. They are generally trained, as they are often promoted from the lower cadres of the Department. But they need not have professional qualifications, if they are freshly recruited. The inspectors of elementary schools are generally trained graduates, but a certain percentage of the posts in this cadre are given to trained primary teachers on grounds of merit and seniority.

What about the training courses in educational administration in this country? These are provided by two agencies—the State Departments of Education and the Universities. The former offer Diploma and Certificate training courses, the degree courses (B.Ed., M.Ed. and Ph.D.) and the Diploma Courses (T.D., Dip. Ed., Dip. Basic Education, etc.) are offered by universities. The Certificate course for Elementary Teachers includes a paper on 'School Management and Supervision'. The course usually includes topics such as functions of the school, class as a unit of organization (its limitations and how to meet individual differences), the curriculum, the extra-curricular activities, the time-table and planning of home-work, punishment and reward, healthful school conditions, health instruction and supervision and school records and registers. The objectives here appear to be to orient the student-teacher to some basic principles of classroom management. It does not aim at the preparation of school administrators.

'Educational Administration and School Management' is a compulsory paper in the B.Ed. course. But this programme aims at

giving the student teacher an idea of what a progressive school is, how a school can be effectively organised, run and supervised, how the life of the student community and the local community can be made rich, happy and fruitful, through the agency of the school. In addition to this course, some of the universities provide an advanced course on School Administration. Hence the student, no doubt, gets a broader, closer and deeper understanding of the subject. Even this programme is not comprehensive enough for an educational administration.

The courses in educational administration offered for the M.Ed. degree in Indian universities show marked variations. In a number of Indian universities, the course in educational administration constitutes one of the four to six elective courses of specialisation. The title and the sectional divisions of the course differ with the universities. For instance, in universities like Baroda, Gujarat, Bombay, S.N.D.T. Women's University, Sardar Vallabhbhai University (Anand), the course includes four sections, two in each of the two papers, (a) principles of educational administration and finance, (b) educational finance and administration in India with special reference to the Ministry of Education, Government of India, and (a) educational administration in the State, (b) inter-state study of educational administration. The course in educational administration of the Poona University is also of a similar nature with the difference that the second section of the second paper specifies a comparative study of the administrative system, significant achievements and problems of education in Kerala, Madras and U. P. In the Karnatak University the two papers are called : Administration of Education in India and in some of the Indian States and (i) Principles of Educational Administration and Supervision, and (ii) Administration of Education in Mysore State. The Kerala University has named the two papers as (i) Principles of Educational Administration, Supervision and Finance, and (ii) Educational Administration in India. Vikram, Madras and Mysore universities too have two optional papers in the field.

In the Rajasthan University, the course constitutes one of the nine elective areas of specialization and consists of two papers : (i) Principles of Educational Administration, Supervision and Finance and (ii) prevailing practices of educational administration, supervision and finance. The Jabalpur and the Saugar universities too have an elective course in educational administration consisting of two papers which relate to educational organization and administration in India, England and U.S.A. and inspection and administration of schools.

In the Agra University, the course in educational administration constitutes one of the six elective areas of specialization, but three papers are to be offered therein. The papers are : (i) Principles of educational administration and human understanding, (ii) principles of supervision and (iii) curriculum development.

In Aligarh University, the course in educational administration is both compulsory and elective. The paper on the fundamentals of educational administration is among the five basic papers from which a candidate is required to select one paper. This, however, cannot be offered by a candidate who opts to specialize in educational administration. The elective course in educational administration constitutes one of the four elective areas of specialization, each carrying two papers. The two papers in educational administration are named : (i) Fundamentals of Educational Administration, and (ii) Comparative and Historical Administration. In the Calcutta University, too, the course in educational administration is both a compulsory and optional paper. The compulsory paper which is one of the five papers, relates to the theory, history and present state of educational institutions and administration in India. The optional paper, which forms one of the eight electives, is on educational organization and administration. The course in Gauhati University is on the pattern of the Calcutta University.

In some other universities, the course in educational administration forms only one paper among a number of optional papers ranging from five to eight. In this category fall the universities of Andhra, Annamalai, Banaras, Delhi, Nagpur, Osmania, Punjab, Lucknow, Gorakhpur, Sri Venkateshwar, and Utkal. In the Lucknow University a candidate has the option to offer a thesis in lieu of the optional paper in educational administration.

It will thus be seen that the courses in educational administration have received different emphasis in Indian universities. Whereas some universities have sought to provide the basic principles of fairly comprehensive course in educational administration by offering two full papers, one in educational administration, supervision and finance, and the other in the practice of educational administration at the Centre and the State levels, quite a good number of universities provide only a broad elective course in the field.

NEED FOR REFORM

Introduction

The need for improving the qualifications of teacher educators as well as the educational administrators has been keenly felt since independence. For example, the Secondary Education Commission remarked :

From what has been stated above, it seems obvious that care should be taken in selecting the staffs of training colleges, whether for the second-grade institutions or the first, *i.e.*, graduate training colleges. We believe that there should be a picked staff of teachers possessing (i) a good general educational qualification ; (ii) a degree in teaching ; and (iii) at least five years

experience as a teacher in a school. An additional qualification may be three to five years experience as an Inspector. In the case of second grade training institutions, the minimum qualification should be first or second class bachelor's degree with an L.T. or B.T. qualification. In the case of graduate training institutions, the minimum qualification should be (i) an Honours or Master's Degree, or a first class B.A. or B.Sc. degree in the particular subject, (ii) a professional qualification—a Master of Education degree with three years' teaching experience, or an L.T. or B.T. degree with five years' service as an Inspector or headmaster.¹

The Kothari Commission went a step further and suggested that the staff of secondary teachers' colleges should have a double Master's degree, and a fair proportion (say ten per cent) should also have a doctorate. They should also have studied teacher education as a special subject at the M.Ed. or through a special education course.²

The position is equally bad at the elementary stage. For example, a committee of experts on elementary education observed :

While interviewing elementary teacher educators and administrators, we gathered that a large number of them were not professionally prepared for their job. They had practically no experience of elementary education, when they were appointed either as supervisors of elementary schools or as instructors in elementary teachers' institutions. Many of them were the products of secondary teachers' colleges and were B.Eds. These degrees have been designed to meet the requirements of secondary education and do not cater to the needs of elementary education at all. It is thus very necessary to frame suitable professional courses as pre-service pre-paration for elementary administrators and teacher educators.³

For improving the quality of the staff of elementary teacher training institutions, the Kothari Commission recommended that they "should hold, besides the B.Ed. degree, a master's degree, either in education or in an academic subject and should be entitled to receive the same scales of salary as lecturers in arts and science colleges, with two advance increments in recognition of their professional training. We also recommend that the staff of these training institutions should be adequately trained for their work of preparing primary teachers through special orientation or induction courses which should include experience of primary school work."⁴

1. *Secondary Education Commission's Report*. P. 182.

2. *Kothari Commission's Report*. P. 77.

3. *Mukherji Committee's Report*. Pp. 150-51.

4. *Kothari Commission's Report*. P. 79.

The importance of securing the right type of personnel has been emphasized by several committees and commissions. The Hartog Report remarked : "In view of the conditions prevailing in the schools ..., it is of very great importance that the inspecting staff should be strong both in quality and in quantity".¹ The Sargent Report considered it necessary "to check the present deterioration in the status and calibre of the educational administrative service and to enable it to secure the services of the type of officer who will be capable of carrying a scheme of the kind contemplated into successful operation."² And finally, the Kothari Commission viewed that the "existing facilities and arrangements for the training of educational administrators are inadequate".³

Thus there is a general feeling in the country that the professional and academic preparation of teacher educators and the educational administrators is not adequate and up to the mark. This training can be given either through pre-service or in-service education or through a combination of both.

Pre-Service Education

Introduction.—It is rather superfluous to point out that teacher educators and school inspectors should be competent scholars as well as effective teachers. The pre-service education of these persons will, therefore, have to pay attention to two aspects : (a) academic background and (b) professional preparation. This programme should be comprehensive in nature and should enable the trainees to meet the demands of a job requiring specialized knowledge, skills and attitudes and to keep them up-to-date with developments in their fields. Several types of programmes, leading to a degree or a diploma have been recently organised in this country. These cover a number of fields. But the most important among them pay attention to the preparation of : (b) Elementary teacher educators and administrators, (b) secondary teacher educators and educational administrators, and (c) specialists.

Elementary Teacher Educators and Administrators.—In 1963, the Indian Association of Teacher Educators had set up a committee for evolving a detailed programme for training teacher educators and educational administrators at the elementary stage. It drew the following course of a year's duration :

Theory

1. Sociological and Psychological Foundations of Education.
2. Principles of curriculum construction and dynamic approaches to teaching.

1. *Hartog Report*. P. 68.

2. *Sargent Report*. P. 95.

3. *Kothari Commission's Report*. P. 460.

3. Techniques and interpretation of educational research and evaluation.
4. Problems of Elementary education.
5. Either (i) Administration and Supervision or (ii) Teacher Education.

Practical

1. *Practice Teaching* :—Multiple class teaching and correlated teaching. Handling the beginning class and the large class.
2. Organisation of school community programmes, viz., survey of community around the school with a view to initiating social education programme and to get the community resources and help for solving problems of the school.
3. Child study.
4. Evaluating the work of the school and of the class.
5. Supervision of practice teaching by pupil teachers and class teaching by elementary school teachers (including internship practices).
6. Maintenance of student records.
7. Organising workshops, seminars, discussion groups, etc.
8. Experience in craft-work.¹

The Committee felt that these courses should be at the post-graduate level, since the B.Ed., degree or an equivalent diploma is quite inadequate to give the teacher educator or a supervisor at the elementary stage that professional competence which is necessary to meet the new developments in elementary education in the country at present. The Committee further recommended that the proposed course should lead to a Post-graduate Diploma in Education or Master of Education and that the candidates who have taken the B.Ed. degree or an equivalent diploma, may be admitted to it.

The National Council of Educational Research and Training accepted the scheme with slight modifications. It has instituted the course, which is being conducted by its Department of Teacher Education. Candidates from different parts of the country attend the course. It is expected that the State Institutes of Education and a few selected universities will organise similar courses.

Secondary Teacher Educators and Administrators.—It is generally recognised in the country that the teacher educators as well as educational administrators should have at least the M.Ed. degree,

1. I. A. T. E. *Training of Primary Teacher Educators and Supervisors and Administrators*. Delhi 1965. Pp. 8-9.

so far as the professional background is concerned. This is mainly because this course aims at preparing personnel in the field of : (1) Teacher Education, (2) Psychological Services, and (3) Educational Administration. But the existing programme of this course is, however, not quite comprehensive to satisfy either of these needs. Realising this shortcoming, the Kothari Commission in collaboration of the Indian Association of Teacher Educators appointed a Working Group to go into the existing M.Ed. syllabi in our country and to prepare a model syllabus incorporating the latest ideas and developments in the field of education. The draft syllabus as framed by the Working Group was discussed in June, 1965 at the Eighth Conference of the Association and was released in its final shape in August, 1966.¹

Out of the six objectives which the Working Group keep most in the fore-front, the following two are most important :

1. To prepare professional personnel required to staff colleges of education at pre-primary, primary and secondary levels.
2. To prepare professional administrators and supervisors for positions of responsibility in educational institutions, Departments of Education and Educational Planning, and in Supervisory Educational Services.

The objectives are expected to be achieved through (a) a closer study of fundamental basic subjects, (b) specialisation in subjects allied to the selected field and, (c) some research or investigation.

The course as a whole has been made flexible enough to provide, for specialisation in a field or for broad study of education according to the needs and interests of the students. It is divided into following four parts :

I. *Core Subjects*

1. Philosophical and Sociological Foundations of Education (to be treated with reference to current educational problems in India and abroad and systems of philosophy in India and abroad).
2. Elements of Educational Research (in relation to specific problems in Indian education).

II. *Areas of Specialisation* (three papers from one or two of the following areas) :

(1) *Advanced Educational Psychology* :

(i) Educational Psychology ;

1. I. A. T. E. *The M.Ed. Programme*, Delhi, 1966. Pp. 114.

- (ii) Educational Measurement and Evaluation;
- (iii) Psychology of Learning and Development;
- (iv) Psychology of Childhood and Adolescence;
- (v) Experimental and practical work in Educational Psychology;
- (vi) Personality—Development and Adjustment.

(2) *Educational Administration, Planning and Finance :*

- (i) Basic Paper in Educational Administration;
- (ii) Educational Planning;
- (iii) Educational Finance and Economics of Education;
- (iv) Administration of State and Local Systems of Education;
- (v) Secondary School Administration and Supervision.

Or

Pre-Primary and Elementary School Administration and Supervision

Or

Administration of Higher Education.

Or

Administration of Social Education.

(3) *Comparative Education and History of Modern Indian Education :*

- (i) Basic Paper on Comparative Education;
- (ii) Education in U.K., U.S.A., U.S.S.R., Germany, and France.
- (iii) Education in Asian and African Countries;
- (iv) History of Education in Modern India;
- (v) Problems of Education in India.

(4) *Curriculum Development and Text-Books :*

- (i) Curriculum Development;
- (ii) Curriculum and the Primary School;
- (iii) Curriculum and the High School;
- (iv) Curriculum Instruction and Syllabus Improvement; and
- (v) Text-books and Their Problems.

(5) *Teacher Education and Methodology of Teaching :*

- (i) Basic Paper on Teacher Education;

- (ii) Organisation and Administration of a Secondary Teacher Education Institution;

Or

Organisation and Administration of an Elementary Teacher Education Institution;

- (iii) Teaching Methods in one subject-matter field;
- (iv) In-service Education of Teachers and Teacher Educators.

(6) *Methodology of Educational Research :*

- (i) Educational Research : Its Theory and Practice;
- (ii) Research Procedure;
- (iii) Psychometrics;
- (iv) Statistics;
- (v) Educational Research : (a) Literature, and (b) Report.

(7) *Guidance and Counselling :*

- (i) Techniques of Counselling;
- (ii) Principles of Counselling;
- (iii) Educational and Vocational Planning;
- (iv) Counselling in Higher Education;
- (v) Dynamics of Human Adjustment and Child Guidance.

(8) *History of Education Thought, Philosophy and Sociology of Education :*

- (i) History of Educational Thoughts;
- (ii) Philosophy of Education;
- (iii) Element of Educational Sociology;
- (iv) Social Mobility and Education.

(9) *Educational Measurement and Evaluation :*

- (i) History and Development of Examination System in India and Abroad;
- (ii) Principles of Measurement and Evaluation;
- (iii) Evaluation Techniques and Tools;
- (iv) Test Statistics.

III. *A Dissertation* based on a research project or on an investigation, applying the science and the methodology of research.

IV. The *Viva Voce*.¹

Thus the programme has been made very comprehensive and aims at equipping a teacher educator with the basic knowledge of the field in which he wants to specialise. In addition the second field of specialisation, *i.e.*, 'Educational Planning, Administration and Finance' pays attention to the special needs of an educational administrator. The proposed programme is under the consideration of various universities of this country.

The Maharaja Sayajirao University of Baroda, however, felt that a specialised elective course in Educational Administration at the M.Ed. level is rather inadequate to meet the need for specialised and technical training for educational administration at all levels. In 1956 the university instituted a 'Post-graduate Diploma in Educational Administration'. It consists of four papers in theory each carrying 100 marks and field work of 200 marks in each of the four are also included in theory. The candidate has to maintain a record of field work and take a *viva-voce* test.

Paper I has two sections, one on principles of educational administration and the other on the techniques of educational research. The section on principles includes, besides other items nature and analysis of administrative process and techniques of leadership in education, concepts, principles, organization, planning and techniques of supervision and inspection, educational guidance and criteria for evaluating school and college programmes. The section on research includes the location of the fields of research in educational administration, methodology of research and educational statistics.

Paper II pertains to administration of education in India and educational finance. The section on educational administration in India includes the critical study of the role of the Government of India in education, administrative set-up at the State and local levels and comparative study of educational administration in U.K., U.S.A., U.S.S.R., Germany and China in contexts of educational developments and problems in India. The second section on education finance pertains to principles and policies of educational finance, budgeting in schools and institutions of higher learning, administration of educational finance at the Centre, State and local levels and special problems of financing education at different states of instructions.

Paper III provides a comprehensive study of the administrative practices and problems of education in the pre-primary and primary education in India. Similarly, Paper IV relates to the administration of secondary and higher education in the country.

The duration of the course is one academic year for a full-time student and two academic years for a part-time student. The mini-

1. *Ibid.* Pp. 2-3.

imum qualification for admission to the course is a good B.Ed. degree. The yearly intake is not generally more than six students.

Preparation of Specialists.—At the same time, the country needs a band of teacher educators for special fields like Pre-primary Education, Physical Education, Guidance and Counselling, Audio-Visual Education, Science Education, Teaching of English, and allied fields. A number of institutions are running post-graduate diploma courses in these areas. The details of these courses have been examined earlier in relevant chapters of this book.

In-Service Education

Introduction.—Pre-service education is but the beginning of the process of education, which a teacher educator or an educational administrator must continue through in-service work. At the early stages, this experience was given through furlough studies. It was devised in 1902 for the members of the I.E.S. The following details may prove interesting :

The Secretary of State approved, in the year 1902, a system by which officers of the Indian Educational Service are permitted to spend part of their furlough on special duty for the object of studying educational methods and developments in other countries. A few simple rules are laid down for this purpose. The period of study ordinarily does not exceed six months. The officer who wishes to take advantage of the system must make an application in good time, and must sufficiently define the scope of his intended inquiries. The Director of Public Instruction in the province where the officer serves, when receiving such an application, considers it both with reference to the needs of the province and to the fitness of the officer to carry out the enquiries, and the proposal, if approved, is submitted by the local Government to the Government of India. These conditions being observed, the Secretary of State obtains the necessary facilities and the officers who have carried out these studies have gratefully acknowledged the assistance which has been rendered to them, at the request of the India Office, by the Education Departments of the United Kingdom and other countries. On his return from study the officer submits a report of his proceedings and of his observations. The system has proved most useful to those who have availed themselves of it, and the Education Departments in India receive the benefit of the wider knowledge of educational problems which their officers thus acquire.¹

The scheme was abandoned later. But the need for reviving the system was once again pointed out by Abbott-Wood Report. It

1. Government of India. *Progress of Education in India*, 1902-07. Vol. I.

observed, "We consider it extremely important that the more responsible inspectors should have opportunities of studying educational practice and methods of inspection in other countries."¹

The Government of India and State Governments also arranged periodical conferences of departmental officers. These provided them with a good opportunity to meet one another, to establish personal and social contacts and to discuss a number of things informally.

In-service education, however, gathered momentum on the attainment of freedom. Extension Services Departments Units have been established in a number of teacher training institutions. And ultimately, a State Institute of Education has been established in every State. One of its major functions is "to provide in-service training to teacher educators and the inspecting staff connected with elementary education."²

Types of Programme.—The Kothari Commission has rightly suggested that while a secondary teacher educator should have a double Master's degree in an academic subject and in education, the elementary teacher educator should hold a Master's degree in addition to the B.Ed. degree.³ Regarding educational administrators, the Commission recommended, "One of the major reforms now needed is to reorganize the State Education Departments wherever necessary, on the basis of specialised functions, (the need for whom is universally recognised and) what is even more urgent and important, to make adequate arrangements for their specialized training with the help of the universities".⁴

Thus a comprehensive in-service education programme will have to pay attention to academic as well as professional needs of different types of personnel—trained or untrained. The following types of programmes are suggested :

1. Regular courses, leading to a university degree or diploma ;
2. Long-term courses ;
3. Short-term courses ;
4. Correspondence courses ; and
5. Other programmes.

Regular Courses.—As 40 per cent of the members of the staff of secondary training colleges have only a B.A. degree in addition to the B.Ed., it will be necessary to raise the professional and academic

1. *Abbott-Wood Report*. Pp. 31-32.

2. Government of India. *Report of the Study Group on the Training of Elementary Teachers in India*. Delhi, Manager of Publications, 1963. P. 47.

3. *Supra*. P. 409.

4. *Kothari Commission's Report*. P. 460.

competency of an army of existing teacher educators to the level aimed by the Kothari Commission. These persons should be given sabbatical leave for removing their shortcomings. Similar facilities should be given to those elementary teacher educators, who do not hold the M.Ed. degree. An adequate number of scholarships should also be made available to attract good students to these courses. Another desirable step will be to institute M.A.Ed., or M.Sc.Ed. courses in Education, where fresh post-graduates can be admitted without doing B.Ed. This will attract 'intelligent' young men to join the teaching profession. The teacher educators as well educational administrators should be further encouraged to do research work and work for the Ph.D. It may be realised that while two per cent of secondary teacher educators hold a doctoral degree, hardly a dozen of educational administrators have this qualification in the entire country.

Long-term Courses.—It will also be necessary to organise professional diploma courses of a year's duration in some of the special areas like (1) Educational Administration and Finance ; (2) Economics of Education and Planning ; (3) Guidance and Counselling ; (4) Curriculum and Instructional Material ; (5) Educational Measurement and Evaluation ; (6) Science Education ; (7) Language Teaching ; (8) Audio-Visual Education ; (9) Special Education ; (10) Child Development ; (11) School Plant, and (12) Instructional Technology.

These courses should encourage functional specialization amongst teacher educators as well as educational administrators. The N. C. E. R. T. has drawn a plan for instituting an Advanced Diploma in Education which includes some of these areas.

Short-term Courses.—Short-term courses have two specific aims. In the first place, they can refresh the knowledge of the participants in their professional as well as academic fields. Some of the areas suggested for long-term courses come under this category. In the second place, such programmes should break new grounds in content as well as teaching and administration. New areas like 'Programmed Instruction', 'General Science', 'Educational Finance and Planning', 'Economics of Education', and 'Sociology of Education' are coming to the fore-front. It will be necessary to equip some of our teacher educators as well as educational administrators in these new fields. The need for organising short-term courses in these areas is thus very urgent.

The short-term courses can be of various durations from three months to two weeks, depending on the nature of the programme. One of the new innovations is the Summer Course of various durations. These can be profitably attended by teacher educators as well as educational administrators.

Correspondence Courses.—The country has already launched a scheme of correspondence courses for clearing the backlog of untrained

teachers both at the elementary as well as the secondary level. The need for organizing correspondence courses for teacher educators and educational administrators is also urgent. They can be successfully used by various professional groups in different parts of the country. These should aim not only at refreshing their knowledge but also giving them the latest information in their own fields.

A Programme of In-service Education for Educational Administrators.—The Kothari Commission holds that 'Pre-service education for administrators is neither necessary nor possible'...One has to rely on in-service education for the training of educational administrators."¹ Thus an elaborate programme of in-service education is very necessary for our educational administrators. The Department of Educational Administration of the N.C.E.R.T., therefore, set up a working-group for the purpose. The Group, consisting of a few leading educationists, met for ten days at Dharamsala and developed the following programmes :

1. Nine months' course for such educational inspectors, who have no pedagogical background and are new entrants to the State Departments of Education ;
2. Three months' course for new educational inspectors ;
3. Three weeks' course for experienced educational inspectors ;
4. Three months' course for new headmasters of high/higher secondary schools ;
5. Three weeks' course for experienced headmasters ; and
6. Six weeks' course in Educational Administration for teacher educators.²

Other Programmes.—It will also be necessary to arrange workshops, seminars or symposia from time to time. Each of these should deal with a specific item. In addition to these, there are other forms of in-service education. These are some of the items recommended for teacher educators :

1. exchange of senior professors for short periods ;
2. visiting fellowships for younger teacher educators for independent study in selected university departments, research institutions and other specialised agencies ;
3. short-term study visits of teacher educators particularly those connected with educational administration, current problems of Indian education, etc., in Municipal, State and Union agencies of education ;

1. *Kothari Commission's Report.* P. 460.

2. Department of Educational Administration, N. C. E. R. T. *Report of the Working Group on In-service Education and Research in Educational Administration.* 1966. Pp. 47.

4. exchange of visiting professors of training colleges in different States ;
5. Sabbatical leave arrangements for staff of training colleges ;
6. provision for visits by teacher educators of secondary teachers to foreign countries, through UNESCO and some other agencies.¹

Similar programmes can also be arranged for educational administrators. They can pay short visits to some of the States within the country, and can make a spot-survey or study.

Agencies.—These programmes can be arranged by various agencies at different levels. While the NCERT can be responsible for the national programmes, the State Institutes of Education can run local programmes at state level. Some of teachers' colleges and University Departments of Education can also arrange similar programmes.

It may, however, be appreciated that no in-service education programme can be of a permanent nature, unless it is institutionalised. Every state has now a State Institute of Education of its own, which looks to its local needs. An agency of this type is needed at the national level. Realising this need, the Baroda Report recommended that a Staff College of Education and Educational Administration should be set up at the national level.² The Kothari Commission approved of this recommendation, and indicated broadly the manner in which it should function.

1. The object of the college should be to provide in-service education, for about eight weeks, in every five years of service, to all the senior officers in the education service—IES and State Educational Services (Class I and Class II).
2. It should have a permanent and whole-time staff of its own. In addition, it should use as resource personnel, senior officers of the Education Departments and the Ministry of Education. As educational administration cannot function in isolation, competent persons from other departments also should be utilized for purposes of training. This will incidentally serve an important objective of such training, namely, to bring the young recruits to the cadre in living contact with senior officers.
3. It should have a research wing where studies would be conducted in problems of educational administration. It should maintain a good library of books on the subject, both

1. *Baroda Report*. Pp. 77-78.

2. *Ibid.* P. 8.

Indian and foreign. Besides, it should also function as a clearing-house of administrative procedures and practices in the States and Union Territories.

4. As very little material on Indian conditions is available for purposes of training, the college should be established immediately and its first assignment should be to prepare a number of case studies and other data which can be utilised for conducting the training programmes. This may well take about one or two years. It is only when a thorough preparation of this type is made that the training programmes should be started.
5. It should conduct two types of courses ; a longish induction course should be provided for new recruits and shorter courses of 3-6 weeks for officers already in service.
6. In every course conducted at the college, some officers from every State and a few from the Union Territories should be included. It should be an object of policy to cross-fertilize administrative experience.
7. It should conduct periodical conferences, seminars and workshops on matters relating to educational administration.
8. It should conduct a journal on educational administration and maintain a publication wing.¹

India's Fourth Five-Year Plan has already provided necessary funds for setting up such an institution. One does not know when it will be realised. But it will be one of the proudest days of history of educational developments in this country, when it is achieved.²

CONCLUSION

It is indeed true that neither our Ministers of Education nor our Education Secretaries are educational experts by training or profession. The ministers cannot be expected to have some special training, but the secretary should have some experience of the Department of Education since he has to bear the heaviest administrative responsibility. The post of the Education Secretary is regarded as the exclusive preserve of the I.A.S. and his appointment is governed by the exigencies of the general administrative service. Naturally, he has neither special qualifications for dealing with educational issues, nor has he previous experience of the Department of Education since he might not ever handled educational files. Often he has to handle a few more portfolios in addition to education. As late as 1928, Mr. Arthur Mayhew spoke of the "experienced" Secretary who, after spending his morning energy on financial and judicial files, drafted his educational resolution with the sinking sun, and reminded educationists

1. *Loc. Cit.* P. 8.

2. *Kothari Commission's Report.* Pp. 461-62.

that their task was the formation of character and the training of good and productive citizens, and that their methods must be effective within the limits prescribed by economy and public opinion.¹ The same picture partially holds good even today. If education of a State is to be saved from the vagaries of this high official, it will be necessary to attach him for some time to the Department of Education prior to his appointment to this key post. The same principle should be applied if members of the I.A.S. are appointed as Directors of Education.

CONCLUSION

1. A. Mayhew. *The Education of India*. London, Faber and Gwyer 1929. P. 8.

*Muriel Wasi***CHALLENGES TO EDUCATION**

There was a time not many years ago when the ends and means of education did not present a problem of much complexity. Good teachers, willing students were the ingredients of education, and with *rapport* between them, one might look forward to an educated population of some merit.

Today this is not so. For knowledge has brought with it some understanding of the complexity involved in the ingredients of the educational process. The concerted pattern of education still involves a teacher certainly, who is still the heart of the matter. But to make possible the growth and true development of the teacher, to enable him or her to deal with the growth of knowledge, one has to think of a variety of other sources and materials of education. One has to think of a curriculum or general framework within which he works and within which subject-fields are defined in progressive steps for progressive age-groups of students. One has to think of textbooks that cannot be equated with the teacher, but that can make better teachers of good teachers, and less bad teachers of bad teachers. One has to think of experimental instructional materials, teachers' handbooks and students' workbooks to accompany textbooks, and, in order to develop these, one has to plan for workshops in which the teacher shall be an active participant, and carry out organized research in the total process of education. One has to think of how to enlarge the subject-content of teaching at school level and not merely to make a fetish of methodology, though methods do matter.

Nor is this all. One has to see that education is in constant need of evaluation. There are no dogmas and superstitions any longer that can be accepted without verification. Standards must be set, promoted, emulated, but the standards of yesterday are not sufficient unto today. This continuous process of evaluation implies tools of measurement, and the tools in turn imply a long and arduous process of fundamental research in learning and teaching processes.

Finally, one has to get all this knowledge, or at least its practical findings, to the teacher in the field. Educational research cannot work *in vacuo*. It has to reach out to the teacher in the field and to make him feel so deeply involved in the growing process of education that to call him *the heart of the matter* is to mean quite literally this.

While the heart is in good condition, pulsates with energy, steadiness and passion, education grows. When the heart declines, education founders.

What then are the ends of education? What are its means? These are the questions we ask and seek to answer in the discussion that follows.

It is the business of the National Council of Educational Research and Training, the professional arm of the Union Ministry of Education, to define these areas and to spell out, to enunciate, to set, raise and promote standards whereby these instruments shall be more fully and better used.

We are long past seeing education in national pigeonholes. As there are no barriers in health, art, idealism, so there can today be no barriers in knowledge or education. It is the business and the accepted obligation of NCERT to see the total dimension of education, international and national, to study the advances made elsewhere, to adopt, where possible, and to adapt its own slender resources to these changes. In doing this NCERT must be aware of the distinctive features of India's own polity and economy. Numbers are for India an obsessive problem. She is a poor country. She has an acute shortage of teachers and an even more acute shortage of trained teachers. Upon all these NCERT must base its attack.

To see the National Council in the correct educational perspective one has to see what has been achieved in the years between the then (1961) and the now (1967) of educational thought and practice, and to argue from what has been achieved, to what may still be achieved through this national instrument of change. The questions that the National Council has asked itself and the educational world of India are: To what precise end, education? How shall it be made to serve the enunciated objectives for a sub-continent the size of India, at the particular stages of development in which her millions find themselves?

The National Council has continuously analysed and reviewed the questions raised and has sought, first, to develop and enunciate a scientific approach to the problems recognized and identified. Next, it has sought, and seeks, to develop a body of knowledge on curriculum that is the crux of school education. It studies by analysis, comparison and practice, teaching methods, teacher preparation and development, textbook evolution and the development of instructional materials. Increasingly, the role of the National Council has been to develop sufficient expertise in all these matters to enable it to advise the Centre and the State Governments on how to achieve large-scale development in educational practice.

In the last six years, the National Council has been engaged in developmental programmes of research, training and extension in

education. It has undertaken over 50 major projects in fundamental and applied areas of educational research. It has come to grips in stages with major areas bearing on the situation in a seven-pronged attack.

(i) To investigate the fundamental processes of learning and thinking, which include the motive for achievement, the measurement of growth and the explanation of why it is what it is ; the pattern of development of Indian children against the socio-economic pattern of their living conditions ; the development of tests, the study of the gifted and the retarded child. This is a background of fundamental knowledge that must be built up, with a clear enunciation of concepts and understandings. We need today to have a scientific approach to these matters in lieu of the former *ad hoc* assumptions, the dogmas and superstitions that dominated the teacher training colleges. Today, thanks to fundamental research, we know, for instance, that the normal child can be taught the foundations of any subject at any time in a given form. The bases of learning are being scientifically established and not merely conjectured.

(ii) To investigate techniques and methods of curriculum development, stressing the inter-relationships of various subjects, on the level of determinable competence that can be achieved, on how curriculum can be formulated so as to achieve, first, concepts and, then, corresponding understandings.

(iii) Next, to examine how textbooks in important subject-fields can be made to reflect the concepts and understandings built into the curriculum. NCERT has developed sequential materials to the textbook, in teachers' guides, students' workbooks and audio-visual aids.

(iv) To develop extension services to make the teacher an effective instrument of change and to increasingly link up research in teacher preparation and development with practice in the field.

(v) Since the business of training is never done but must continuously be on the anvil, the National Council has developed the in-service training of teachers, teacher educators, educational administrators and research workers.

(vi) To work on examination reform, seeking to inject into the system of examinations that necessary element of objectivity that corrects capriciousness, and also to determine how the student can develop his basic understandings and not merely his power to memorize. To this end, the National Council works closely with State Boards of Secondary Education and organizes a wide range of training courses for paper-setters, examiners, and teachers who are involved in the business of examination. It also prepares a big stock of objective-based model questions in all school subjects.

(vii) The Council has recognized as vital for India today an intensive programme of science and mathematics education, and has initiated and developed this programme that underlies the development of an industrial economy.

Under the International Cooperative Research Programme of the U.S. Office of Education, NCERT has completed nine major research projects on significant subjects in education. They are :

1. A Survey of Secondary Schools in India.
2. The Achievement Motive in High Schools and Training for it.
3. Scholastic Aptitude Tests in Hindi for Classes VIII and XI.
4. Evaluative Criteria for Inspection and Supervision of Secondary Schools.
5. Wastage and Stagnation in Primary and Middle Schools in India.
6. A Survey of Achievement in Mathematics at Three Levels of School Education.
7. A Study in Costs of Education in India for the Period 1951-61.
8. Identification and Incidence of Talent in Elementary and Secondary Schools.
9. Curriculum and Teaching of Mathematics in Higher Secondary Schools.

In addition, the Council has carried out a number of vital projects such as :

- Studies of academically gifted boys
- Stabilization of abilities and interests in Indian children Development of selection tests
- Factors affecting career choices of adolescents
- Self-concept of bright under-achievers
- A survey of training facilities for guidance personnel in India
- Socio-metric studies
- Developmental norms project
- Programmed instruction
- Mathematics achievement survey
- Scholastic aptitude test
- Identification of talent in elementary and secondary schools
- Achievement motivation, and
- Survey of pre-primary teacher training institutions.

Special mention should be made here of the *Development Norms Project* that is essential for teacher training and for curriculum

planning. For we have as yet little knowledge of the pattern of development of Indian children. The Developmental Norms Project aims at evolving norms of progress in Indian children, that are necessary in order to prepare curricula and learning experiences suitable for various age-groups. The project that is being prepared by the Council's Department of Psychological Foundations is being operated in seven regional centres in India. The testing of children from 2 1/2 years of age in seven urban areas—Allahabad, Delhi, Bombay, Madras, Calcutta, Hyderabad and Ahmedabad covering about 2,500 children, has been done. Work on the rural sample of children was started in May-June 1965 when about 2,200 children from rural areas in these seven zones were tested. The longitudinal study was started in the middle of 1965 to test the same children at each of these centres at fixed intervals of six months. Forty-two children at each of these centres were tested first on the day they completed two years, six months and one day. After that, these same children were tested exactly six months later, and so on, for a period of two years.

Other important research projects among those mentioned above are : the Development of Evaluative Criteria for the Inspection and Supervision of Secondary Schools ; and the Achievement Motive in High Schools and the Training for it that enables us to find out whether our students are low on achievement motive and whether it is possible to provide specific training to teachers in techniques for motivating students. Then, there is the invaluable project of Wastage and Stagnation in Primary, Middle and Secondary Schools, Programme Instruction and the Mathematics Achievement Survey ; and the Co-operative Tests Development Project that seeks to develop two series of tests : one in regional languages, a verbal test of intelligence for the age-group 7+ to 16+, and another, a vocational interest inventory for the age-range 14 to 25 years. These tests are being developed on a cooperative basis between NCERT and seven research centres that are located at Trivandrum, Coimbatore, Calcutta, Patna, Aligarh, Bombay and Mysore.

In addition to the research that the National Council has planned within the Departments of the National Institute of Education, it has made a practice of farming out, in collaboration or independently, research projects to various centres in the country on the basis of grant-in-aid. Its purpose has been to activate research work and to build up focal points all over India that will act as centres seeking to stimulate a knowledge of educational research in the Indian situation, that has so far remained uncharted territory.

Over 50 research projects which deal with a variety of important projects in educational research have been farmed out to various institutions in different parts of the country, *e.g.*, Madras, Gujarat, Mysore, Calcutta, Agra, Allahabad, Varanasi, Bombay, and Punjab. They include such projects as the Teachers' Role in the Indian Secondary School System. They also deal with a Survey of Academic

Achievement, Reasoning Ability and Memory in Relation to Language Achievement. Particularly important among the projects farmed out is the preparation by the Tata Institute of Social Science of thematic papers on various aspects whereby sociology can contribute to education. The research project on the Sociology of Education has been costly but, in national terms, well worth the investment in it, because it provides the sociological foundations for Indian education. In addition, research has been conducted at Osmania University on the Patterns of Social Recruitment and Occupational Choice in an Apex Educational Institution.

TEXTBOOKS AND SUPPLEMENTARY EDUCATIONAL MATERIALS

Another and most vital process of learning, and a means to education, is the Textbook. All learning is acquired in one of two ways. Either the student learns for himself or he is taught by a teacher. In the first case, the learner is generally without a curriculum or framework within which to study. In second case, the teacher is provided with a curriculum within which he must teach. This is his guide. But the curriculum cannot be taught without a textbook. What then is the function of the textbook? It cannot be equated with the teacher. But it is the logical outcome of the curriculum within which the teacher works. And for students, assuming the textbook to be a good one, it can be an inestimably valuable source of education.

As the professional arm of the Union Ministry of Education, the National Council of Educational Research and Training has the special responsibility of bringing out model textbooks in various subject-fields at the school level of education. It is required to produce allied educational literature such as teachers' manuals, students' workbooks and supplementary educational materials in fields relevant to the school level of education.

The National Council set up a Central Committee on Educational Literature that has met regularly between 1962 and today and has supervised the preparation of textbooks and other educational literature in 15 subject-fields. The fields are : (1) agriculture, (2) biology, (3) chemistry, (4) commerce, (5) English, (6) general science, (7) geography, (8) Hindi, (9) history, (10) mathematics, (11) physics, (12) Sanskrit, (13) social studies, (14) teacher training, (15) technology for secondary schools, and vocational institutes.

The *modus operandi* for producing textbooks has varied in the course of the last five years. It was, however, clear from the start that the National Council required to have men eminent in the field in which textbooks were to be produced. Most of these men had operated at post-graduate level in universities but had little experience of school teaching and the problems of evolving textbooks to fit school curricula.

In order, therefore, to produce model textbooks for schools it was essential to relate the expertise of the university professor to the practical experience of the school teacher. At first, expert panels were set up under the supervision of eminent chairmen. In many fields, a syllabus was hammered out before the textbooks were prepared. To speed up the work, editorial boards were set up in mathematics, physics, chemistry, general science and history. These editorial boards elaborated further the textual materials developed by the panels, evaluated them and gave the textbooks their final shape.

The textbooks so far prepared by the National Council are :

Biology

A Textbook of Biology for Secondary Schools (Sections I—VII).

Algebra

A New Textbook of Algebra for Secondary Schools (Part I)

Geography

Practical Geography for Secondary Schools.

History

Ancient India—A Textbook of History for Middle Schools.

Hindi

Kavya Sankalan and Gadya Sankalan for Secondary Schools.

Hindi Primer and Reader for Class I with Teachers' Manual and Students' Workbook.

Hindi Reader for Class II.

Social Studies

Teachers' Manuals and Charts for Class I and II.

Textbooks for Classes III, IV and V.

TITLES IN PRESS

Biology

Section I and II (Hindi Versions)—A Textbook of Biology for Secondary Schools.

Biology Textbook for Middle Schools accompanied by Teachers' Manual (English and Hindi).

Commerce

Book-Keeping and Accountancy for Secondary Schools
(Volumes I and II).

English

Textbook for Class III.

Geography

Physical, and Economic Geography for Secondary Schools.

Hindi

Reader for Class III with Teachers' Manual and Pupils' Workbook.

Textbook for Class VI accompanied by Teachers' Manual.

Kavya Ke Ang and Ekanki Sankalan—Supplementary Books for Secondary Schools

Mathematics

Textbook for Class I.

Geometry Textbook for Middle Schools accompanied by Teachers' Manual and Curriculum Guide (English and Hindi).

Arithmetic Textbook for Middle Schools accompanied by Teachers' Manual and Curriculum Guide (English and Hindi).

Physics

Physics Textbook for Middle Schools accompanied by Teachers' Manual and Curriculum Guide (English and Hindi).

A Textbook of Physics for Secondary Schools—Part I—Mechanics and Properties of Matter.

Sanskrit

Sanskritodaya (Textbook for Secondary Schools).

General Science

Teachers' Handbook for Primary Schools (Volumes I, II and III) (English).

Social Studies

Textbooks for Classes IV. and V.

Technology

Textbook for Technical and Vocational Schools.

Elements of Electrical Engineering.

Engineering Drawing.

Workshop Practice (Volumes I and II).

Elements of Mechanical Engineering.

Most of these textbooks will be published during the current year.

Many of the States and Union Territories have accepted the Council's textbooks. In addition, the Central Board of Secondary Education, Delhi, the Central Schools Organization and the Directorate of Education, Delhi, have accepted the textbooks and are using them.

In addition to the textbooks programme that is at the core of the production of educational literature, the National Council has a large programme of supplementary enrichment materials for children in secondary schools. Under the programme, 'The Romance of Teaching' has been brought out for the age-group 14-17 years.

Other supplementary books are under preparation that will promote national integration by offering children in this age-group thoughtful portraits of great Indian nationals such as Gandhi, Nehru, Tagore, Akbar, Raja Ram Mohan Roy, Kabir and Guru Nanak.

The National Council also brings out two important periodicals : a bi-monthly, the NIE JOURNAL (Journal of the National Institute of Education) whose purpose is to provide a forum for teachers, teacher educators, educational administrators and research workers, to encourage original and critical thinking in education through the discussion of current educational reviews, and to foster the development and improvement of educational practice. The second periodical, *Indian Educational Review*, is devoted exclusively to research, both fundamental and applied, and appears twice a year.

FIELD SERVICES

No matter how excellent our fundamental and applied research, unless their findings reach the teacher in the field, they will be sterile. As textbooks and supplementary educational materials are tried out with practising teachers in workshops in which the teacher is evidently the instrument of change, so the entire structure of training and extension in field services is designed to bring about that volume of change that is implied in a continuous process of evaluation, discovery and feedback. All change, all innovation must reach out to take in the teacher, to make him the hub of the continuing revolution in education.

Educational reconstruction in India implies the use of the integrated professional experience of specialists in research, planning, development and administration. The Associateship Course of the National Institute of Education seeks to train such specialists in curriculum development, evaluation and measurement, audio-visual education, guidance and counselling, research methodology, educational administration and other areas of educational enterprise. Its object is to equip potential Associates with professional functional competence at the level of post-graduate study.

Research and training apart, one of the main functions of NCERT has been to develop on a subcontinental scale programmes in educational extension. This is done through the Department of Field Services. The Department has evolved a new training programme through internship extension; workers have been given special training in the development of instructional materials and the improvement of the functional use of school libraries. A number of training seminars with selected groups of headmasters have been arranged.

There are at present 97 extension services departments in India under NCERT's Department of Field Services. These Departments are organizing on a continuing basis extension and in-service educational activities for the benefit of secondary schools in India. A large number of developmental programmes aimed at improving secondary education have also been conducted. More than 500 schools are involved in the programme of intensive school improvement. Each school has developed a programme of improvement in specific areas depending on its need and the needs of its teachers.

LISTENING TO THE TEACHER

For some years past, the National Council has engaged in a special project of *Seminar Readings* the objective of which is to provide teachers and other educationists with the means of making significant educational experiences of their own widely known by writing papers on specific topics selected by the Council's Department of Field Services. The authors of the 20 best papers selected from over a thousand received each year are awarded prizes of Rs. 500 each with a certificate of merit. Their papers are discussed and widely publicized.

A particularly valuable venture in extension is the School Experimental Project conducted by the Council to encourage enterprising and enthusiastic schools to use their initiative to try out new ideas. Schemes are received from the schools and approved projects are given financial assistance. Guidance is given by the Council's Department of Field Services. Over 700 schools are now participating in the programme, some collectively and others singly.

Since the entire purpose of research and training is to feed all advances in educational ideas to the teacher and through him to the student, we must measure the success of our educational policy by the impact that it makes upon the teacher. The teacher is our instrument of change. As we have pointed out earlier, we have about one hundred centres reaching out to the teacher in the Field. The Centre must maintain a two-way traffic with the States. The National Council must project to the States the problems that it is advisable for all States to consider and work on; the States must communicate with the Centre so that education shall not exist *in vacuo*. In order to maintain this continuous association and liaison, the Council is proposing to get up field units with State Departments of Education.

NEW DIRECTIONS IN TEACHER EDUCATION

The National Council's four regional colleges of education that are located at Mysore, Bhubaneswar, Ajmer and Bhopal exemplify a new inter-disciplinary approach to good teacher education. At our colleges, subject-content is closely integrated with methodology.

Such integrating makes for the total development of the future teacher both in his particular subject-field and in the methods and techniques of teaching the subject. Divorce between subject-content and methodology is one of the more serious deficiencies in the traditional system of teacher educating followed in about 250 secondary teacher training colleges in our country. The regional colleges are demonstrating how teacher education should be reorganized and improved to meet our needs for today and tomorrow. To them, the business of teacher training is not just a course; it is a gradual, continuous and unitary process in which new attitudes and values are motivated and a surer foundation laid for the professional development of teachers.

Another distinguishing feature of the regional colleges is designed to train specialist teachers in science, technology, commerce, agriculture, industrial crafts and other technical vocational fields that must ultimately constitute the educational complex in our country. These are precisely the subject-fields in which we are woefully short of well-trained and competent teachers. To meet this need, the regional colleges are conducting full-fledged courses and also special one-year courses for graduates. Through these courses, the colleges are demonstrating and establishing new means to teacher preparation. According to plan, each college will have an enrolment of about 2,000 student teachers in the next five years. It is also proposed to elaborate the same principle of integrated training at the post-graduate stage and set up at each college facilities for the Master's Degree course in science and other subject-fields.

A large proportion of our serving teachers in schools are untrained or inadequately trained and they constitute nearly 40 per cent of the

total number of teachers. Unless they are adequately trained and well-equipped, the professional quality of our school education will remain poor. It is also extremely difficult to bring these teachers to a regular training college and train them on a full-time basis. Other short-cuts that will yield quicker results are needed. The regional colleges have, therefore, started correspondence-cum-summer school courses for untrained teachers in which over 400 teachers are enrolled at a time. The teachers come to the regional colleges for two summer vacations lasting about 16 weeks for intensive in-service training. In between, they receive through the colleges correspondence courses in their professional subjects. We hope that through this special programme a major portion of the backlog of untrained teachers will be cleared in the next five years.

SCIENCE IN SCHOOLS

In the second half of the twentieth century, the importance of science and technology to every nation does not need to be argued. It is evident to the most casual observer. The explosive expansion of fundamental scientific knowledge that began in the first half of the century is a potential source of penetrating improvement in a nation's economy, capable of bringing to every citizen more food and water, better clothing and shelter, greater opportunities for education and wage-earning and, in general, a healthier, safer and more rewarding life. But if a nation is to be able to exploit modern science and technology, it must have men and women competent to do fundamental scientific research and men and women competent to translate the resulting knowledge into means for improvement of the national economy.

What is true of all nations is true in a special degree of developing societies such as India's. If the recognition of one truth in education in the twentieth century is more valuable than any other, it is that education is the most potent instrument for change anywhere. India, the developing society per excellence, is at the stage of having to pull herself up by the bootstraps out of the rut of a traditional society to move swiftly and effectively into that orbit of modernity that is a pre-condition of national survival.

Three Integrated Steps

Improvement in the total standard of science and mathematics is a continuous process that demands three integrated steps, and the process begins necessarily at school level. It moves as follows :

- (i) Development of a curriculum that includes modern concepts and understandings of the subject-fields and a rigorous, analytic study of fundamentals.
- (ii) Preparation of textbooks based on the new curriculum ; teachers' guides/manuals and other instructional materials ; designs of experimental kits and apparatus.

- (iii) Training teachers to enable them to introduce the curriculum into the classroom.

In all progressive countries, the preparation of teachers and materials has been a cooperative effort in which university professors and top-flight scientists have worked closely with top-flight science teachers. In India, it is distressingly true that school and university teachers seem not to have met at professional level, and that the interchange of experience and knowledge between these levels of educational learning and practice has, therefore, hardly existed. The recognition that this gap must be bridged may have come to us late, but it has come, and this is a matter for rejoicing.

Today and Tomorrow

What is primarily and urgently required is a long-term programme that must be implemented in close cooperation with the State Governments. The first step in this process is, as we said earlier, the development of a total curriculum for different stages of school education, and this depends upon the formulation of basic concepts in physics, chemistry, biology and mathematics. The basic concepts are the foundation on which the organic development of a subject rests, *e.g.*, the concept of mass, time and length in physics, stoichiometry and chemical bond in chemistry, sets and number systems in mathematics and so on. The basic concepts also help in quantifying a subject and presenting it sequentially. To identify the basic concepts and to present them in a logical way, building up correct understandings, is fundamental to total curriculum development.

To this end, the NCERT in cooperation with the University Grants Commission convened in April last year a conference on science education with over 25 university professors in science, and Russian, American and UNESCO experts in science education to examine how the plan enunciated above could most effectively be carried through. Following upon the decisions of the conference that met under the Chairmanship of Dr. D. S. Kothari, Chairman of the University Grants Commission, the National Council has established Curriculum Development and Study Groups in Science and Mathematics at 20 university centres in Delhi, Bangalore, Jaipur, Calcutta, Chandigarh, Madras, Kanpur, Hyderabad, Baroda, Poona and Anand. Each Study Group functions under the direction of a senior university professor and is assisted by four university and school teachers. They will develop an integrated system of curricular materials in order to help teachers to achieve the correct understanding of concepts in physics, chemistry, biology from a modern standpoint and for an integrated understanding of the universality and totality of scientific knowledge. It will be their objective to develop a scientific bent of mind and the scientific temper in preference to developing skills. The materials will be tried out on an experimental scale in selected schools with the help of school teachers. These schools will be laboratories

for the project of associated schools and the materials will be refined and made available for application for the first time on a national scale.

The involvement of a large number of university professors and professional scientists in the development of science and mathematics education at the school stage marks a very significant advance in our educational life.

The study groups will produce all the curricular materials needed for the first level of secondary schools by the end of the current year and the materials for the higher level of secondary schools by the end of 1968.

Summer Institutes

If the teacher is the most important instrument through which science education must be improved, he must be continually trained in the current developments of science and mathematics and equipped with a thorough understanding of the subjects to be able to teach them effectively. In-service training of science teachers must, therefore, occupy a pivotal place in the total programme of science education. To this end, the National Council, in cooperation with the University Grants Commission, organized four years ago, for the first time, four summer institutes for science teachers in biology, chemistry, physics and mathematics. There were approximately 40 participants at each institute and each institute was directed by a university professor. The summer institutes lasted about eight weeks, were enthusiastically conducted by university faculties and enthusiastically participated in by the teachers.

The institutes were experimental in nature. They emphasized investigatory activities in which the participants used the laboratory to experiment, to collect data and to integrate data so obtained. This is the way a scientist uses a laboratory. Science advances so rapidly on all fronts that the emphasis in these new programmes is upon finding and understanding those ideas that have universality and that can be used to interpret a wide number of related phenomena.

The chief concern of the participants was how to adapt their new-found knowledge to the classroom situation. Ideas had emerged that did show that many of the universal ideas of science can be taught in the classrooms of India. The teachers found ways by which they could devise and conduct experiments to facilitate the learning of students.

The success of the Summer Institutes has made such a big impact on teachers that the demand for the institutes has steadily grown in the last three years. The spiral of professional enthusiasm that the institutes have generated continues to grow, penetrating to parts of India in which science-mindedness was, till quite recently, a rare thing.

The National Council and the University Grants Commission are now holding over 50 summer institutes each year to cater for nearly 3,000 secondary school teachers at a time. So far nearly 10 per cent of our serving teachers have had the benefit of training in summer institutes. The programme of summer institutes will be expanded and further strengthened on a long-range basis and over 30,000 teachers in science and mathematics will be trained in the course of the next five years.

To train teachers to teach modern science would not by itself be effective if the materials for science teaching were not simultaneously evolved. It is clear that the Curriculum Development and Study Groups set up will play a major role. As materials are developed by the groups, they will be used in our summer institutes. For the preparation of first rate textbooks, the services of eminent scientists have already been secured. The books are at various stages of preparation and will be available, some this year and the rest next year. Under the direction of Dr. A. R. Verma, Director, National Physical Laboratory, New Delhi, a team of physicists are preparing a series of textbooks in physics. For chemistry textbooks, the team is headed by Dr. T. R. Seshadri, FRS., Professor Emeritus, Delhi University. Dr. J. N. Kapur, Professor of Mathematics, Indian Institute of Technology, Kanpur, is heading a team of mathematicians for textbooks in mathematics. The late Dr. P. Maheswari, FRS, of Delhi University, completed some time ago a textbook in biology in seven sections that has been published by the National Council. A team of biologists headed by Dr. B. R. Suxena of Osmania University, Hyderabad, is now preparing a teachers' guide, laboratory manual and other instructional materials to go with the biology textbooks.

The preparation of textbooks and curricular materials must be accompanied by appropriate scientific equipment and apparatus. To be effective, science teachers also require to be well-equipped in methods of science teaching and particularly in demonstrating and conducting scientific experiments. They must be able to improvise apparatus and maintain the equipment in their schools. The Central Science Workshop set up by the National Council is producing prototypes of scientific apparatus and equipment needed for modern science teaching, and also adapting instruments that have been used in developed countries to conditions in India. It is also attempting to fit the revised science curriculum into our schools. A wide range of scientific apparatus, experimental kits and other materials for demonstrating scientific principles have been designed and constructed by the Central Science Workshop.

Science Talent Search

The revolution in science has three ingredients—good teachers, good textbooks, good students. We have dealt with the first two. What about the third ?

Indian children do not yield in intelligence to the brightest children in the world, but they have not had the opportunity of children in countries of the progressive world. It has been experimentally proved that the scientific aptitude tends to mature by the close of the secondary stage of education. This aptitude begins to terminate by about 12+ to 13+ and tends to be developed in full form by about 16+ to 18+. Consequently an experiment was conducted in 1963 at Delhi to locate scientific talent at the end of the secondary stage. The tools of selection consisted in the use of a scientific aptitude test, an essay paper and an interview. Through these, it was possible to locate scientific talent with precision. This experiment was successful and was extended to cover the whole of India in 1964.

In 1964 another tool for selection was added by the participants on the basis of their experimental and observational work. This tool has proved to be of great use since through it, it is possible to test mental creativity, initiative and self-confidence in students.

From 1964 onward, 350 scholars were carefully selected through these tests and awarded scholarships each year to pursue higher studies in the basic sciences. A specific condition for the award of the scholarship is that the student must continue his studies in basic science courses and not be diverted into other, and sometimes more remunerative fields.

Till 1965 this scholarship was awarded for a period of three years only, that is, to pursue the B.Sc. course. This year the whole scheme was reconsidered. It has now been decided that these students of promise, who are selected each year on the basis of the comprehensive testing scheme, should be awarded scholarships for a period of at least nine years, i.e., three years in the B.Sc., two years in the M.Sc. and four years at the Ph.D. level, provided their academic progress is good.

Other steps taken to nurture scientific talent are : improved science curricula, award of current science books and periodicals; placement at suitable institutions of higher learning, organization of summer schools for talented scholars—a very special feature that has recently been introduced as part of the follow-up programme of the entire scheme. It includes personal contact between scientists of repute and the scholars, so that the awardees may develop a research spirit. Every effort is made to inculcate in the scholars a deep sense of responsibility towards executing worthwhile scientific projects and the habit of utilizing their leisure hours to pursue activities that will form the edifice of scientific research.

Field Project for Science

Having evolved a curriculum, instructional materials and laboratory apparatus and equipment, how are all these to be made

available to Indian schools? In close association with the state governments and boards of secondary education, we must introduce the new curriculum in stages. Each year, about 25 per cent of the schools in each State will require to be selected to introduce this new curriculum, so that at the end of a five-year period, all schools will follow it, and use the new textbooks and new instructional materials. As soon as a group of schools is covered, a separate examination must be held for students following the new curriculum. The examination will incorporate much-needed reforms such as the objective evaluation of students in their understanding of the subjects taught, and not what has been crammed by them from notes. The Examination Reform Unit of the National Council of Educational Research and Training will evolve a new scheme of examination for the science education project. So, educator and scientist will work together to bring to our schools subject content, and skill in its communication.

As the new curriculum is introduced, the teachers in the schools concerned must be brought to selected centres for orientation, preferably during the summer vacation. The training must aim at involving the teachers emotionally and intellectually in the project and equipping them with the methodology and techniques needed to teach the new curriculum. They will have to be motivated to accept a challenging task, and to work towards its accomplishment. In this big endeavour, our Summer Science Institutes must play a major role.

THE COLLECTIVE QUEST

In the final analysis the main factors that determine the direction and pace of educational reconstruction in India are an imaginatively constructed curriculum, examination reform, production of model textbooks and other instructional materials and teacher development. Every other aspect of education is related to one or other of these factors and must be considered in the totality of learning and the communications processes. These are the areas in which the National Council has been actively engaged these last six years. And these are the areas in which its decisive impact on the educational scene in the States will be made in the coming decade.

Intrinsically, the sources of education work quietly, but their success depends upon the steadiness with which they are seen to be necessary, the vision with which they are advanced and the energy with which they are applied. This is a collaborative effort in which the Centre and the States, the research worker and the teacher, the school and the community are all engaged to the hilt of their imagination and their vitality. Upon this total collaborative effort will depend that tomorrow for our children, for which we plan and work today.

25 THE INDIAN ASSOCIATION OF TEACHER EDUCATORS

V. G. Jhirgran

INTRODUCTION

To-day, eighteen years after the independence of India, we are faced with the task of educating millions of children and youth, in order to make them worthy citizens of a sovereign democratic republic. It is our duty to so educate them that they would be not only self-disciplined and competent to guard the political independence gained, but also be capable of spreading democracy to the social and economic aspects of life.

Realising the colossal magnitude of the practical problems confronting India, the University Education Commission, referring to the effort needed for original work in education, declared, "No task in front of India seems to us more urgent than this."¹

It has long been recognised that the positive aspect of discipline has reference to whatever is conducive to efficient life within the school by raising its tone and by increasing the devotion and pride of the students towards the school. In order that the school-community may be worthy of such worshipful devotion and sincere pride, it should be dynamic in its growth nursed by the mature service of a band of loyal teachers. But, however loyal and serviceable might the teachers be, progress can only be achieved by a steady development in a definite direction. This catholicity in outlook can only come from training in the right type of teachers' colleges.

The Conferences

First Conference.—Unseen and unknown had the effort needed for original work in education already started in November 1950 with the First Conference of Training Colleges in India, under the joint auspices of Maharaja Sayajirao University of Baroda and the Indian Institute of Education, Bombay. (*Baroda, November 1950*).

While inaugurating the Conference, attended by 33 delegates from 26 Secondary Training Colleges and University Departments of Education and 7 invited individual educationists of repute, Smt. Hansaben Mehta orated on the importance, and neglect of the army of teachers, on the divorce between teachers' colleges and schools and on the narrowness of their sphere of work. She recommended to the Central Government the task of setting up of a commission devoted to the problem of the recruitment, training and maintenance of teacher

1. *Report of University Education Commission, 1964-66.* Pp. 48-49.

educators and teachers needed for all plans of educational reconstruction. The business conducted at this Conference were :

1. Review of existing training colleges in India,
2. Problems connected with the administration of training colleges,
3. Organisation of an Indian Council of Teacher Education,
4. Planning, promotion, co-ordination and publication of educational research in India,
5. Modification of the syllabuses of the (1) M.Ed. Course, (2) B.Ed. Course, (3) Undergraduate Teacher Training Courses,
6. Administration and financial implications of the modification, and
7. Consideration of following items :
 - (1) Observations of the Radhakrishnan Commission ;
 - (2) Problem of the medium of Instruction ;
 - (3) Problem of Terminology in Education ;
 - (4) Educational Journals ;
 - (5) Production of Educational Literature ;
 - (6) Co-ordination of Library Facilities ;
 - (7) Psychological Tests ; and
 - (8) Educational and Vocational Guidance.

The Constitution unanimously adopted by the First Conference is as follows :

1. The name of the Association shall be the "Association of Training Colleges in India."

Explanation : The expression "training college" shall mean an institution which provides a course for teacher training recognised by a University;

Provided, however, that the Executive Committee may admit to membership such institutions of teacher-training as, in its opinion, are functioning at the university level.

2. Its registered office shall be at such places as, the Executive Committee may decide from time to time.

3. The objects of the Association are :

- (1) To hold periodical conferences of training colleges ;
- (2) To serve as a clearing-house for information regarding the training of teachers at the university level ;
- (3) To publish literature bearing on teacher training at the university level ; and

- (4) To do all such other things as may be necessary to further the above objects of the Association.

4. The membership of the Association shall be open to all training colleges as defined in Rule 1. Each member institution shall pay an annual membership fee of Rs. 12 and shall be entitled to send not more than two delegates to the conferences of the Association.

5. The Executive Committee of the Association shall hold office for a period of two years. It shall consist of :

- (a) President,
- (b) Vice-President,
- (c) 12 members, and
- (d) 2 secretaries.

6. The Executive Committee shall take all steps to carry on the work and administration of the Association in accordance with the decisions of the Conference. It shall decide its own rules of business.

7. All matters not specifically provided for in this constitution shall be decided upon by the President in consultation with the Executive Committee. But all such decisions shall be communicated to all member-institutions and shall be laid before the next Conference for confirmation.

The Constitution was unanimously adopted. The proceedings then started with the welcome speech of Shri T. K. N. Menon, the Dean of the Faculty of Education and Psychology, Baroda University. He explained how in his Presidential address to the Section of Education and Psychology, at the Indian Science Congress, 1949, he discussed the Teachers and Educational Reconstruction. Thereafter he convened the First Conference with the objective of obtaining a lead in putting Teacher Education in its proper perspective to the teachers of the future. Shrimati Hansa Ben Mehta, Vice-Chancellor of the Baroda University, in her Presidential Address to the Conference said that in the wide society at large, the teacher is ordinarily neglected as a person of no consequence ; and as if in continuation thereof, in the smaller world of teachers themselves a "teacher of teachers" becomes a comparatively more insignificant person, a poorer Cinderella among a gathering of Cinderellas." Three features of our training colleges are primarily responsible for the general backwardness of this branch of our educational system, which are :

- (1) Our training institutions are not united,
- (2) A training institution is isolated from the schools for which it prepares teachers and very often, from its own alumni,

3. Principles and Practice of Curriculum Construction.

In the fields of Specialisation, a candidate was given the option of selecting two papers from his chosen field. The alternative papers recommended for the special fields were :

A. *Teacher Education*

1. Principles and Practice of Teacher Education.
2. History of Educational Thought.
3. Comparative Education.
4. Advanced Methodology of one School Subject.

B. *Psychological Services*

1. Educational and Vocational Guidance.
2. Mental Hygiene and Child Guidance.
3. Educational Measurement and Evaluation.
4. Advanced Educational Statistics.
5. Advanced Course in Curriculum Construction.
6. Education of Handicapped Children.

C. *Educational Administration*

1. Principles of Educational Administration, Supervision and Finance. (This will include a comparative study of educational administration in 3 or 4 selected countries).
2. Educational Administration in India with its historical background and with special reference to one's own papers.

The Conference resolved that on passing in the papers and a related research dissertation the university should award a degree and that it was advisable to allow candidates after passing the M.Ed. examination with specialisation in one area to specialise in another area subsequently when the candidates could have their certificates endorsed to this effect by the university.

Sixth Conference.—This was held under the joint auspices of the Association and the D.E.P.S.E. at Bangalore in June, 1961. It discussed the reports of three Working Groups, which were set up previously. These were in following areas : (a) Critical study of the research work already undertaken by the training colleges and the formulation of a programme for research work in the Third Five Year Plan, (b) To work out a blue-print of the basic requirements of a teacher training college in respect of the staff, accommodation, equipment etc., for B.Ed., M.Ed. and Ph.D., and (c) To formulate a programme for the improvement of pre-service training of science

teachers to meet the new requirements of science education at the secondary level.

The recommendations made by the Conference are given below :

1. The need for well-planned and coordinated research into educational problems should be recognised.
2. The training colleges should implement Teacher Preparation in Health Education.
3. All training colleges should undertake a national survey of teacher education for further implementation.
4. By a modification of the programme in general science, or organising summer courses of adequate duration and giving workshop practice, Pre-service Training in Science Education must be improved.
5. Like the science kits produced by the Science Service of U.S.A., modified and adapted useful aids to the teaching of science should be available.
6. The draft syllabus in Audio-visual Education should be adopted as an optional subject in the B.Ed. curriculum.
7. The basic requirements of the training colleges should be provided.
8. Every training college should adopt a scheme of Extension Work.
9. The training colleges holding a key position in promoting the programme of examination reform should adopt a scientific system of evaluation.

To meet the basic requirements of training colleges, the Working Group recommended : (1) the setting up of a committee to draw up detailed list of equipment, (2) the setting up of a committee to draw up an annotated bibliography of reference books and journals, and (3) the bringing out adaptations of well-known and authoritative books on education.

For promoting research in the Third Plan, the Conference asked the Association to set up a Standing Committee to devote itself, to guide and to direct the problem of research in education and to start a journal to devote and give a periodical review of the research work done and being carried on. It also requested the Union Ministry of Education to undertake Research Studies on Educational Administration.

The Conference, while agreeing with the suggestions of the Working Group, made the following recommendations to improve Pre-service Training in Science Education : (1) the programme of science education should be modified to include content also especially in general science, (2) in order to give science teachers sufficient

competence in those areas which they had not covered in their graduate course, universities should organise summer course of adequate duration in these subjects, (3) pupil teachers should be given workshop practice and experience in organising practical work using local and community resources and improvised material.

Seventh Conference.—This was held at Mysore in June, 1964. The conference discussed the Report of the 'Study Group on the Education of Secondary Teachers in India'. This Group had met in Baroda (March 2 to 7, 1964) under the chairmanship of Dr. S. N. Mukherji, the Dean of the Faculty of Education and Psychology, Baroda University and the Director, Advanced Studies in Education, India. The Conference also considered the Report of the COOP Team. Ultimately, the Conference made the following recommendations :

1. Teacher Education Programme should be built up to enable trainees to acquire skills and techniques needed to teach young children, besides including in education certain accepted ideas ;
2. Proportionate allocation of funds should be made available for teacher education ;
3. Every training college must have a practising school attached to it ;
4. Teacher-Training should be linked with Research ;
5. A committee should revise the course of study of Teacher Education ;
6. Pay scales of teachers should be as per U. G. C. scale ;
7. The gulf obtaining between the training institution product and what is required in a school should be narrowed ;
8. The size of a training college and its intake capacity should be determined ;
9. Every training college should have the university atmosphere of free academic thinking ;
10. The publication of suitable text-books at the national level should be undertaken ;
11. The setting up of area training organisations which will integrate and supervise the training of teachers at all levels should be done ;
12. Correspondence course to reduce the backlog of the 5 lakhs untrained teachers should be introduced ;
13. Summer institutions of training to increase the number of trained teachers should be started.

The other important topics discussed were : (1) The Comprehensive Training College; (2) The Four-Year Training College; (3) Practice Teaching; and (4) Inservice Education of Teacher Educators.

Constitution of the A.I.A.T.C.—The Conference also enlarged the scope of the Association, throwing its membership to all teacher educators of secondary training colleges. It may be noted that till then, only principals of secondary teachers colleges and heads of departments could alone be its members.

Eighth Conference.—This Conference met at Taradevi (Simla) on June 12, 13, 14, 1965. It was presided over by Prof. A. C. Deve Gowda. It will never be forgotten by posterity, in as much as the scope of the Association was enlarged to include all types and levels of teacher training institutions. As such, the organisation was named as the National Association of Teacher Educators (N.A.T.E.). It would be remembered that the All-India Association of Teachers Colleges was started in 1950, as the Association of Principals of Training Colleges. In 1964, the Association opened its doors to the staffs of secondary training colleges. But in June 1965, it further widened its membership to include teacher educators of pre-primary, primary and secondary levels of education as well as teacher educators concerned with music, physical education, arts and crafts, and other branches of education. The N.A.T.E. now represents all types of teacher educators and will soon become the largest national organisation of education.

The Conference also discussed the report of the Working Group on 'National and State Council of Teacher Education'. It was rightly pointed out that without the active interest of Government of India, the existing gulf between the schools, training institutions, State Directorates of Education and the Universities cannot be bridged. These four agencies, although vitally concerned with teacher education, have been working in splendid isolation. Unless steps are taken to bring them together, teacher education would not be effective and teacher educators would not make their full contribution in the educational development of the nation.

The Conference regarded with concern the problem of clearing the back-log of untrained teachers, and desired the Government of India to take the help of the training colleges.

The Conference recommended the setting up of a Working Group for planning Summer Schools with a view to providing professional training leading to the B.Ed. Degree. Carefully planned Correspondence Courses to supplement and strengthen the work of Summer Schools was also contemplated.

Two drafts of B.Ed. and M.Ed. courses were prepared by a Working Group and were discussed by the Conference. However, it

was stipulated that steps should be taken to publish the syllabi and to circulate to all universities for implementation with necessary modifications.

As there is no better way of improving the quality of teacher education than the four-year B.Ed. courses, the Conference considered the report of the Working Group and through the aegis of the Association urged the Government of India to implement the four-year B.Ed. courses during the Fourth Five-Year Plan.

Examination reform being the crux of quality education, the President exhorted the N.A.T.E. to initiate major projects in this direction by improving evaluation procedures.

In pursuance of the recommendation of the VII Conference, a Master Plan has been prepared for 15 years in Mysore and Orissa in the first instance. It is hoped that the Master Plan would mirror the most precious dreams and visions of a mighty future for Teacher Education in India.

The Conference passed twelve resolutions on these heads and forwarded to the Government for necessary action. The noteworthy feature of this Conference was the spectacular results achieved. Three of the Working Groups submitted Reports on subjects of national importance. They are :

- (a) Correspondence Courses in Training Colleges,
- (b) State Councils for Teacher Education, and
- (c) Four-Year Courses in Teacher Education.

As for the Correspondence Courses in Training Colleges, it was originally the Report of the Study Group of the National Council of Educational Research and Training. The object is to prepare a workable scheme whereby the techniques of instruction could be used by correspondence for the professional education of teachers for primary and secondary schools. The Report is divided in three sections : Section I contains general recommendations that are applicable to teacher education both at secondary and elementary levels, Section II contains recommendations specifically for secondary school teachers, and Section III contains recommendations intended for elementary school teachers. The Conference resolved that professional training leading to B.Ed. Degree should be expeditiously provided through Summer Schools, supplemented by foregoing Correspondence Course by the Government of India, so as to clear the backlog of untrained teachers in secondary schools by 1975.

Regarding the recommendations of the Baroda Study Group, it was decided that early steps be taken to promote Teacher Education at the National and the State level, which was endorsed by the fifth

Conference. In pursuance of this recommendation, a Working Group prepared the proposal of establishing National and State Councils for Teacher Education, detailing the Constitution and Functions thereof. The Conference resolved that the Executive Committee be authorised to take necessary action.

In pursuance of the recommendation of the Seventh Conference, this Conference set up a Working Group in collaboration with the National Council of Educational Research and Training, New Delhi, to examine the recommendation of the starting of Four-Year Training Colleges. The scheme was to be completed during the Fourth Five-Year Plan by phases. The first phase was worked out in details in the Report. The Conference brought to the notice of the Government of India, the Education Commission and the U. G. C. the urgent need for giving priority to teacher education in the Fourth Plan period.

The Ninth Conference.—The year 1966 is a memorial year in the educational history of this country. It was during that year that the Report of the Education Commission was released and the details of the Fourth Five Year Plan were finalised. It is gratifying to note that some of the members of this organisation were closely associated with the Education Commission and the Planning Commission for drafting plans and programmes for the improvement of teacher education.

This conference was held at Trivandrum in October, 1966. Two important themes discussed in the Conference were : (1) Teacher Education in the Fourth Five Year Plan and, (2) Education Commission and Teacher Education. The Conference drafted the following resolutions :

Resolution I

The Indian Association of Teacher Educators records its great appreciation for the significant position given to Teacher Education by the Education Commission in its report and for making bold and comprehensive recommendations for the improvement and expansion of Teacher Education in India.

The I. A. T. E. recommends strongly to the Government of India, State Governments and Universities to implement the report of the Education Commission on Teacher Education on a priority basis. Especially, the Association requests them to implement the following recommendations immediately :

1. Formation of the State Boards of Teacher Education.
2. Abolition of tuition fees in all teacher training institutions.

3. Parity in salary scales, service conditions and other fringe benefits between private and government institutions for teacher education, and also parity between teacher training colleges and professional colleges.
4. Establishment of an experimental school for each teacher training institution.
5. Provision of stipends and other financial assistance to all student teachers under training.
6. Extension of the period of training for elementary school teachers from one year to two years, where such provision does not exist at present.

Resolution II

It is very gratifying to note that the Planning Commission has given a more prominent place to Teacher Education in the Fourth Five-Year Plan by allocating about 10 per cent of the total outlay of Education to Teacher Education and by creating a separate sector of Teacher Education in the Fourth Plan. It is also gratifying to note that the Planning Commission has incorporated several recommendations and suggestions made by the I.A.T.E. from time to time for the qualitative improvement and development of Teacher Education in India. The Ninth Conference of I.A.T.E., therefore, records its deep appreciation and satisfaction for these steps taken by the Planning Commission to recognise the role of Teacher Education in accomplishing quality control in education.

The I. A. T. E. requests the Planning Commission to attach high priority to the implementation of the following aspects of the Plan by the agencies concerned :

1. Clearing of the backlog of untrained teachers both at the Primary and Secondary stages of education.
2. Strengthening the existing teacher training institutions by providing additional staff, facilities and equipment.
3. Expanding and improving inservice teacher education both for primary and secondary schools.
4. Expanding facilities for the improvement of qualifications of educators.

Resolution III

The I. A. T. E. is very happy to note that its recommendation to set up State Boards of Teacher Education has been accepted by the Education Commission. It urges that speedy action may be taken by the Government of India and the State Governments for its early implementation.

The I.A.T.E. is, however, disappointed to note that its recommendation to establish a National Council for Teacher Education on the lines of the All-India Council for Technical Education has not been accepted by the Education Commission. The recommendation of the Education Commission for the setting up of a Standing Committee of the U.G.C. for the same purpose would no doubt meet the need of the situation to some extent. The I.A.T.E. apprehends that the large number of Elementary and Pre-Primary Training Colleges numbering about 1,500 and a large majority of the Secondary Training Colleges which are not under the Universities are likely to be kept out of the purview of this Standing Committee. This will result in defeating the main purpose of the recommendation made by the I.A.T.E., viz., to remove the isolation between different levels and types of Teacher Education institutions and to improve the quality of Teacher Education as a whole. Nevertheless the I.A.T.E. is grateful to the U. G. C. for taking immediate action in the matter of constituting this Standing Committee and for including the President of the I.A.T.E. as one of its members. The I.A.T.E. assures its full cooperation to this Committee. At the same time, it requests the Government of India to reconsider this issue and to constitute a National Council for Teacher Education without any delay.

Resolution IV

The Education Commission has shown a great concern regarding the isolation of teacher education institutions from the university life. The I.A.T.E. shares this concern with the Education Commission and recommends that appropriate measures be taken by the concerned agencies to break such isolation and to bring teacher education in the main stream of the academic life of the universities. As one of the measures directed towards this end, the I.A.T.E. recommends that at least one outstanding teacher educator may be included as a member of the University Grants Commission.

Resolution V

In view of the recommendation of the Education Commission that a systematic effort has to be made on a high priority basis to improve the nature of examinations in training institutions, this Conference resolves that a Committee be appointed to prepare a comprehensive scheme of evaluation in Teacher Education at all levels.

The Executive Committee of the I.A.T.E. will, in collaboration with the N.C.E.R.T., constitute the Committee and take necessary action to get the scheme prepared. A representative of the U.G.C. may also be requested to work on this Committee.

Resolution VI

There has been a significant expansion and development in the field of Teacher Education in recent years. The I.A.T.E. has been well aware of these developments and has already drafted comprehensive programme of study and syllabuses for B.Ed. and M.Ed. levels.

In order to improve the quality of teacher education, to orientate teacher educators in the new developments in the field, it is essential now to formulate a comprehensive programme of In-service Education for Teacher Educators. The agencies concerned with such a programme may then be requested to implement the scheme.

The Executive Committee of the I.A.T.E. will take necessary action to set up the Committee and to work out the scheme including a detailed programme for M.A. in Education. This may be done in collaboration with the N.C.E.R.T. and the U.G.C.

Resolution VII

Resolved that immediate steps should be taken to improve the programme of student teaching in the teacher training institutions in India.

This Conference is deeply concerned with the shortcomings of student teaching and recommends that urgent action be taken on the following :

1. Development of a scheme of cooperating schools and the training of cooperating teachers ;
2. Organisation of orientation programmes for supervisors for student training ; and
3. Preparation of Handbooks for the use of College Supervisors and student teachers.

It may be noted that due to some technical difficulties about the word 'National' for registration purposes, the name of the Association had again to be changed. It is now known as the Indian Association of Teacher Educators. The Trivandrum Conference further prepared a draft for setting up State/Local Associations. A move in this direction has already been taken and several local associations are springing up in the country.

Conclusion

Such is the brief history of the activities of the Association during a short period of 16 years. Beginning with an enrolment of 40 members, today the Association has over, 1,000 members on its roll. The Association has made its presence felt in the educational world of this country. Many of the reforms formulated by the Association in its various conferences have already been implemented. The President of the Association is an *ex-officio* member of the Standing Committee on Teacher Education of the University Grants Commission. Some of its members have also participated in international seminars.

The Association has over 20 publications to its credit and it has now started publishing an educational quarterly known as 'TEACHER EDUCATION'. A building programme is also on the anvil and steps have been taken to raise funds for this purpose. It is hoped that within a short period the Association will have its own building with a library, research centre and a conference hall.

TEACHERS IN OUR SCHOOLS

Today approximately twenty lakh teachers are bound together by a chain of common purpose : to provide the best possible education to the future citizens of this nation. They are working in about six lakhs of recognised primary, middle and secondary schools in the country. To be exact, the total number of teachers is 19,09,187 and they are employed in 5,79,496 recognised schools. Of these, about 70 per cent work in rural institutions.

The women teachers constitute 21·7 per cent of the total teacher population in the recognised schools in the country. Amongst the male teachers 62·1 per cent are employed in primary sections, 22·8 per cent in middle sections and the remaining 15·1 per cent in secondary sections. Amongst the women teachers, 64·7 per cent are working in primary sections, 23·1 per cent in middle sections and 12·2 per cent in secondary sections.¹

The total percentage of trained teachers is 73·4—77·0 for women teachers and 72·5 for men teachers. This percentage varies section-wise, in the primary sections 73·7 per cent teachers are trained, in the middle sections 75·2 per cent teachers are trained whereas in the secondary sections 69·6 per cent are trained teachers.²

The additional requirements of teachers under the Fourth Plan are 8,00,000 (5,20,000 for additional enrolment and 2,80,000 for replacement at the rate of 3 per cent) for the elementary stage, and 2,15,000 (1,57,000 for additional enrolment and 58,000 for replacement at the rate of 4 per cent) for secondary stage. It may be noted that the replacement at the secondary stage has been taken at a higher rate in view of the fact that a large number of teachers leave for alternative employment.

WHAT AILS TEACHER EDUCATION ?

From what has been presented in the earlier chapters of this volume, it will be evident that professional education of teachers in

1. NCERT. *Second All-India Educational Survey*, New Delhi, Publication Unit, 1967. p. 64.

2. *Ibid.* p. 67.

this country has undergone vast changes. There has been a considerable expansion, and new experiments have been launched. The situation is, however, not very happy. Teacher training as it obtains at present is essentially nothing more than a continuation of the patterns set more than a generation ago. The main drawbacks have been examined by a number of committees and commissions, and by several seminars and study groups. For example, The University Education Commission, 1948-49 remarked :

There is not much systematic research in Education going on in India today.¹

And the Secondary Education Commission observed :

However, excellent the programme of teacher-training may be, it does not by itself produce an excellent teacher. It can only engender the knowledge, skills and attitudes which will enable the teacher to begin his task with a reasonable degree of confidence and with the minimum amount of experience. Increased efficiency will come through experience critically analysed and through individual and group effort at improvement. The teacher training institution should accept its responsibility for assisting in this in-service stage of teacher-training.²

The International Team drew the attention of the country to the following major defects :

1. Lack of integration in programmes of training teachers for different levels ;
2. Insufficient co-ordination between the work done in training institutions and in schools ;
3. Inadequate conception of the role of training institutions for different levels and consequent inadequate staffing and equipment ;
4. The domination of an external examination and its cramping effect on training programmes ;
5. Inadequate provision for the training of certain types of teachers, viz., of Indian language ; of technical and other special subjects such as agriculture, home science and commercial subjects ; of craft ; of art and music ; of physical education.³

1. *University Education Commission's Report, 1948-49.* p. 215.

2. *Secondary Education Commission's Report 1952-53.* p. 178.

3. *Report of a Study by an International Team, Delhi, Ford Foundations, 1954.* pp. 28-29.

The following recommendations of a Study Group are noteworthy :

The programme for the reform of teacher education cannot be implemented effectively through *ad hoc* measures : it must be supported by an adequate organisation. We are firmly of the conviction that a time has come to create a permanent organisation at all levels which would be charged with the responsibility for improving teacher education and which should be giving continuous thought to its problems.¹

And the Committee on Plan Projects suggested that :

As many of the existing 216 training colleges as possible may be encouraged to develop into the new type of comprehensive or multipurpose teacher training institutions.²

The following recommendations of the Baroda Report are noteworthy :

1. The Government of India should take early steps to set up by law an appropriate organisation at the national level charged with the responsibility for planning, organising, supervising and financing teacher education. It may be called the National Council for Teacher Education.
2. There should be constituted by statute in each State a State Council for Teacher Education, composed of representatives of the universities and the State Departments of Education and other specialists.³

And the Mukerji Committee remarked :

Adequate academic and professional preparation of teacher educators is the necessary pre-requisite for the success of any programme of teacher education.⁴

The Review Committee on Education, which was set up to examine the standards of teaching and research in the Departments of Education of Indian universities, observed :

1. Ministry of Education. *Report of the Study Group on the Training of Elementary Teachers in India*, New Delhi, Manager of Publications, 1963. p. 48.

2. Committee on Plan Projects. *Report on Teacher Training*. New Delhi, 1964. p. 96.

3. *Baroda Report*. pp. 89-90.

4. *Mukerji Committee's Report*. p. 152.

There is at present a certain lack of agreement in regard to the principles and practices, incorporated in the programme of study offered by various institutions in Education. The courses prescribed reveal considerable variations in regard to goals as well as the means for achieving them. Practices relating to admission, choice of the curriculum and type of research required of the students lack proper co-ordination. Such conditions make it difficult for various training institutions and departments of Education to make a real contribution to educational thinking and planning in the country.¹

And finally, the Kothari Commission remarked :

The quality of training institutions remains, with a few exceptions, either mediocre or poor. Competent staff are not attracted ; vitality and realism are lacking in the curriculum and programme of work which continue to be largely traditional ; and set patterns and rigid techniques are followed in practice teaching, with a disregard for present-day needs and objectives.²

There are a few salient recommendations of some of the important reports and working groups. Unfortunately these have not yet been implemented in a large measure. There is, however, a general agreement in the country that a sound programme of teacher education is very essential for the qualitative improvement of education. And we cannot have a successful programme of teacher education unless :

1. There is effective administration and planning ;
2. The standard of the instructional programme is raised ;
3. There is improvement in the quality of training institutions ;
4. Educational research is properly developed ;
5. The programme of in-service education of teachers is comprehensive in nature ; and
6. Financial provision is adequate.

SUGGESTED REMEDIES

But if the experts have pointed out the major weaknesses of teacher education of this country, they have also offered very helpful suggestions not only for rectifying them but even for strengthening the entire system. It will be worthwhile examining the main suggestions.

1. U.G.C. *Report of the Review Committee on Education*, New Delhi, U.G.C. 1966. p. 53.

2. *Kothari Commission's Report*. p. 67.

Administration and Planning

According to the existing arrangements, while the Central Government is responsible for the qualitative improvement, the State Governments have to pay attention to the quantitative aspect. But the responsibility of both these aspects does not rest on one single body at either level. At the Centre, it is shared by the Ministry of Education, the Planning Commission, the N.C.E.R.T. and the U.G.C. The Ministry draws the list of such programmes that it considers important, the Planning Commission provides funds for the items which it recognises as significant, the N.C.E.R.T. puts approved plan and non-plan programmes into action, and the U.G.C. scrutinises whether the scheme is a 'university' or a 'non-university' item. Each strives in its own way, and none of them works for a common goal.

There is a lack of coordination at the State level too. The State Departments of Education and the University are the two main agencies in the field. The former is the employing agency, and the latter is the degree or diploma granting authority. Each works in its own way. The State Government is not clear about the number and type of teachers it needs. There is an absence of planning and the Government employs the B.Eds. and M.Eds., manufactured by the universities without at all questioning whether they have the necessary academic and professional background suiting the needs of the State. It cannot refuse the employment of these trained graduates, since they have the B.Ed. licence with them. The universities cannot be blamed for this, since they are not aware of the needs of the State. Even at the government level, conflict arises in those States where teacher education is controlled by two different Directorates. ✓

The administration of teacher education has also become complex due to the increase in the number of teacher training institutions. Twenty-five years ago the country had less than five hundred teacher education institutions, and the administration and organisation presented no problems. With two thousand teacher education institutions of an unintegrated variety existing in the country today, the situation is totally different. And with the developmental programmes, which the country is envisaging in future, the situation will be more and more complicated. Unless the training of teachers is systematised properly and based on sound lines, the entire planned programme of school education is bound to collapse. It should also be appreciated that on the foundation of school education, the structure of technical and higher education is to rest.

In addition to the coordination of teacher education programmes of different categories, it will also be necessary to systematise the professional preparation of teachers on a national basis. This is necessary, as there is a considerable diversity in the programmes of teacher education in different parts of the country.

Thus we urgently need a national agency for teacher education, which may prepare plans for the development of teacher education in the country, set standards for teacher education, coordinate activities related to university education among various States, establish international contacts in the field, and discharge such other functions which may be necessary for strengthening the field in all its aspects. It is also equally necessary to have State agencies for planning teacher education programmes within the State, supervising and arranging for necessary finance for teacher education, and maintaining desirable standards of teacher education—both at pre-service and in-service levels.

The need for establishing such an agency, both at national and State level, has been stressed by several blue-prints. In 1962, the Study Group on Training of Elementary School Teachers also made a recommendation that every State should have a State Council for Teacher Education. Similar suggestions were made by various Commissions, Committees and Study Teams set up during the last two decades including the Secondary Education Commission which suggested the establishment of Teacher Training Board. The International Team on Secondary Education and Curricula recommended the establishment of Area Training Organizations on the British pattern for the purpose of integrating, controlling and supervising all training of Teachers

Finally, on the recommendation of the Kothari Commission, a standing committee on Teacher Education attached to the U.G.C. has been established. Its main functions are :

1. To develop and establish standards for training institutions and university departments ;
2. To coordinate and improve standards of teacher education at all levels ;
3. To advise universities and State Departments of Education regarding programmes, curricula, text-books and qualifications of staffs, of training institutions at all levels ;
4. To grant funds to teachers' colleges, departments or schools of education in the universities ;
5. To arrange for periodical inspection of training institutions and university departments of education ; and
6. To develop and support financially, in cooperation with the universities or State Departments of Education, programmes for the in-service improvement of teacher educators and teachers, both in subject matter and in professional qualification and skill.¹

1. *Kothari Commission's Report.* pp. 87-88.

The Commission also favoured the establishment of a State Board of Teacher Education working in collaboration with the U.G.C. in each State. The State Boards of Education are to be responsible for following aspects of teacher education :

1. Prescribing standards for training institutions ;
2. Improving curricula, programmes, examinations, text-books and instructional materials for teacher education ;
3. Prescribing conditions for the recognition of training institutions and arranging for their periodical inspection ;
4. Offering consultative services to the institutions ;
5. Ensuring that candidates completing the prescribed courses are competent to teach in the schools of the State ; and
6. Preparing plans for the immediate and long-term development of teacher education, both qualitative and quantitative.¹

It will take some time for the establishment of the proposed State or the National Council of Teacher Education. In the meantime, it will be necessary for each State to prepare its own master plan for teacher education. It should make an estimate of the number of teachers required subject-wise, the training facilities existing at present, how the present institutions can be developed and expanded, where and in what form new institutions should be developed, and how different types of institutions existing at a place can be interlinked with one another. ✓

The master plans of all the States can then be consolidated into a master plan for the country as a whole. This was stressed by the Baroda Report.² But nothing has been done in this connection except that the IATE appointed a Committee to make a survey of the "Training of Secondary Teachers in the Mysore State" The report has just been released.³

Instructional Programmes

The existing programmes of teacher education at different levels are considered rigid, stereotyped, and divorced from the realities of schools and the national life. They will have to be vitalised as to enable them to meet the present challenges facing education of this country today. In short, there is an urgent need for reorganising all the courses at different levels. It will be necessary to (1) reorient the content courses, (2) strengthen the professional programmes, (3) improve methods of instruction, (4) reform the evaluation procedures,

1. *Ibid.* p. 71.

2. *Baroda Report.* pp. 28-29.

3. I.A.T.E. *A Plan for the Training of Secondary School Teachers in Mysore State.* New Delhi, S. 25 Green Park, 1967. p. 78.

(5) improve student teaching, (6) develop special courses and programmes, and (7) to increase the duration of programmes.

One of the most striking trends throughout the world is the recognition that education of a teacher is not simply a matter of his professional preparation for class-room practice. For a high quality teacher must be a generally well-educated person and a highly informed man in his teaching field as well as a skilled practitioner in the class-room.

By the term "generally well educated man" we mean one who can communicate efficiently with his fellow men in speech and writing ; one who has developed sufficient understanding of the social, political, economic, and technological life of his times and its historical and cultural roots so that he can live in it wisely and effectively as a citizen, a worker and a house-holder ; one who understands himself and others so that he can relate himself effectively to others in society ; and one who has developed a set of personal values that he is willing to live by. Education for these qualities of a teacher both precede and accompany his professional preparation for the class room, throw responsibility on the teachers in elementary and secondary schools, on college and university professors.

For fulfilling this objective, the training programme both at elementary and secondary levels are being broadened. The Mukerji Committee has already stressed on the need for including (a) General Education, (b) Remedial Programme, and (c) Advanced Content Course in the courses of study for elementary teachers.¹ The four-year degree course in education also lays a great stress on 'Content Courses' and 'General Education'² ; The revised B.Ed. programme has laid a special emphasis on Content Courses.³

But the preparation in subject field is not primarily the responsibility of the training colleges, but again of the high schools, of arts and science colleges, and of the universities. It is they who inform the teacher, make him aware of the methods and processes through which the discipline has developed and of its structure, bring him to the point where he can select from his field those materials and experiences which will have fundamental value for his class-room beginners in the subject.

There is also an urgent need for vitalising professional studies, as they include a great deal of matter which is either out-of-date or has little relevance to a teacher's work in the school. Such dead matter should be eliminated and replaced by what is directly related to the personal and professional needs of student-teacher. While the over-

1. *Mukerji Committee's Report*. pp. 53-54.

2. *Supra*. pp. 288-39.

3. *IATE. The B.Ed. Programme*. p. 16.

crowding of content should be avoided there is need to coordinate and integrate the different courses and to root the entire curriculum in Indian conditions.¹

The professional programme at the undergraduate level needs a new approach. It should be based on three broad areas—sociological, philosophical and psychological foundations. The Education Commission has further recommended that a wide choice should be offered so that it would be possible for a student to choose education in combination with any other subject, *e.g.*, one or more of the natural sciences, mathematics, behavioural sciences, more subjects in the humanities, and even professional courses like engineering or social work.²

Instruction in our institutions is often of a dull and monotonous nature, and the majority of instructors resort to stereo-typed lecture method supplemented by pre-examination dictation of notes on selected important topics. The lecture method may not be bad in itself. Indeed, it has an important place in teaching methodology. But when it becomes the only method, it defeats the purpose of education and makes examination and passive acceptance of information the end of everything. So it should be judiciously applied along with other methods and techniques like discussion, seminars, workshops, tutorial groups, etc. These stimulate independent thinking, intellectual initiative and mental maturity. In short, an attempt should be made to develop the student-teacher's maturity through contacts, experience, study and discussion. ✓

The examination system also needs considerable reform. It should be realised that the new movement in the examination reform cannot be effective unless the training institutions themselves become significant sources for new practices and they themselves exhibit the practice of the new examination reform in their own programmes. In other words, training colleges themselves should practise this new examination reform in their B.Ed. and M.Ed. courses by improving internal and external assessment of their examinations of teacher education. Unfortunately this is not the present position as far as our training colleges are concerned. The staff of the training institutions should, in fact, determine the various aspects of the achievement of students which need to be evaluated and in consonance with such aspects develop a variety of evaluation instruments for a try-out by teachers.

A recent trend in the examination reform movement has revealed that examination should not only be designed to improve evaluation or assessment but it should also be designed to improve education in general and in this movement the role of training institutions is very

1. *Kothari Commission's Report*. p. 73.

2. *Ibid.* p. 68.

subjects but no Degree or Diploma in Education.¹ Thus a fair proportion of teacher educators are below mark, if the suggested criteria of the Education Commission are applied.

The position is worse at the elementary stage, since the majority of teacher educators have training in secondary colleges and have practically little or no experience of teaching in elementary schools. Their academic and professional background is also not adequate, since a large proportion of them have only the bachelor's degree in addition to B.Ed. The Education Commission has recommended that these teachers should hold, besides the B.Ed. degree, a master's degree, either in education or in an academic subject and should be entitled to receive the same scales of salary as lecturers in arts and science colleges, with two advance increments in recognition of their professional training.

There are two possible solutions for improving the quality of teacher educators, if the criteria aimed by the Education Commission have to be achieved. In the first place, we will have to be very careful about future recruitment. The new entrants to the profession should fulfil the qualifications fixed by the Commission. In the second place, there is an urgent need for a comprehensive programme of in-service education for the existing teacher educators. Those, who are below the standard, will have to be brought up to the mark.

Students.—It has already been pointed out that secondary teachers' colleges do not attract students holding 'good' degrees that the subject-knowledge of these teachers leaves much to be desired, and that a fair proportion of students try to specialise in those subjects which they might not have studied at the college stage at all.² For overcoming these difficulties, the Education Commission has suggested:

1. No student should be allowed to specialise in the teaching of a subject unless he has studied it for his first degree or obtained an equivalent qualification prior to training;
2. There should be liberal provision of scholarships for covering the entire cost of education of post-graduate degree holders and for undergraduate students in scarcity areas like science, mathematics and English on condition that the scholarship holder, on completion of the course, teaches in a secondary school for not less than five years. There should be adequate provision of stipends to other students, covering about 25 per cent of the enrolment. They should be supplemented by loan scholarships, available on an adequate scale. One-tenth of the loan should be written off every year of service as a teacher after training.

1. Department of Teacher Education. *Second National Survey of Teacher Education*. NCERT. (Unpublished, pp. 126-27.)

2. *Supra*. pp. 147-48.

3. Attempts should be made to attract first and good second class students each of whom should be given an adequate scholarship to cover the total costs of training.¹

The position is equally deplorable in elementary teacher training institutions and various committees and commissions have repeatedly stressed that 'matriculation' should be the minimum qualification for admission. This condition will, however, be relaxed in case of women teachers in view of the shortage of matriculate women candidates taking up teaching as their profession. This will equally hold time for backward areas where there are not enough matriculates, ready to join the teaching profession. But the total duration of a training course of these candidates should be three and not two years.

Physical and Other Facilities.—The position regarding physical facilities, the demonstration school equipment, library, laboratory, playing fields of teacher training institutions at different levels is very discouraging. These have been examined in preceding chapters of this book at relevant places. It is high time that national norms are fixed for these items for different types of institutions. Till that is achieved it will be very necessary to enforce departmental and university regulations for granting recognition to teacher training institutions.

The Indian Association of Teacher Educators has already fixed certain "Basic requirements for a post-graduate secondary college of education" for a unit of 200 students.² These take into consideration items like staff, practice teaching arrangements, accommodation, equipment, library and the demonstration school. Similarly the basic needs of an elementary teacher training institution have been examined by the Mukerji Committee's Report.³ The country should try to reach these targets, aimed at by these two expert bodies.

One of major tasks facing teacher educators of this country is to train a large number of teachers to serve the additional enrolment in elementary and secondary school population during fourth and subsequent plan periods. Requirements of this order will necessitate a huge expansion in training facilities.

Two alternatives seem to be presented to those holding policy and financial control in the country : *Either* (1) Build more small colleges of the same general nature as the existing ones; hopefully better equipped and staffed but leaving the existing ones as at present ; *or* (2) Improve the existing colleges and institutions at critical points and double or treble their student populations.

1. Kothari Commission's Report. p. 78.

2. IATE. *The B.Ed. Programme*. Appendix IV.

3. Mukerji Committee's Report. Ch. XII.

The first alternative is not desirable, since the average capacity of less than 100 trainees in each training institution not only increases the per capita cost but also fails to have such impact on the school practices. On the other hand, a recent trend in teacher education in most parts of the world is the progressive increase over the past 20 years in the number of students each training institution is caring for. In marked contrast to the situation in India, where 100 students has been thought to be an optimum number for training, many institutions in other countries are educating up to 1,000 to 2,500 teacher candidates each. In the United States, for example, of the two hundred thousand new trained teachers turned out in 1965, over half of them came from institutions putting out four hundred or more teachers each. The largest of these turned out twenty-seven hundred new teachers that year. And in England, the Robbins Committee recently recommended that teacher training institutions should increase their strength so that none should have less than 750 students in training.

This aspect of teacher education has been examined by a number of working groups during recent years. There is a unanimous opinion that no training institution should have a student enrolment of less than 200, and that the possibilities of setting up large-size institutions and comprehensive colleges should be fully explored.

It is also depressing to note that the student enrolment in a fair proportion of teacher training institutions is lower than the sanctioned strength. Of course, there is want of proper planning. But government policy of recruiting both trained and untrained teachers has also contributed to this factor. As a result of this policy, untrained teachers are being appointed even when trained teachers are available. This has a very baneful effect on the training of teachers. As the Mysore Report remarks :

This entirely undesirable practice has a more serious effect on the image of the teaching profession in the mind of the public. It has given an impression that professional training is not necessary to become a teacher while it is indispensable in the other professions like medicine and engineering.¹

It is very necessary for every State Government to issue orders that no untrained teacher will be appointed in any recognised institution, as long as a trained teacher is available.

Educational Research

The output of research during the last two decades is really encouraging, and some of the universities have come out with remark-

1. IATE. *A Plan for the Training of Secondary School Teachers in Mysore State. op. cit.* p. 68.

ably good work. There are, however, three main drawbacks. In the first place, there is want of planning. The research work suffers from isolation for want of a coordinating agency. This responsibility can be entrusted to the N.C.E.R.T. or the Centres for Advanced Study in Education or the proposed National Council for Teacher Education. Secondly, there is the absence of adequate research on problems under Indian conditions. "This compels," as the Education Commission says, "teacher educators to deal too much with generalities and platitudes."¹ Finally, the problems confronting Indian education are so stupendous and so complicated that the efforts of even the most gifted and persistent individuals, seem diversified in comparison. There should be a national plan for educational research, and the entire country should strive to work on the suggested problems. These can be individual or co-operative research.

In-service Education of School Teachers

One of the most successful programmes of recent years is the in-service education of secondary and elementary teachers. The extension units centres attached to a large number of training institutions are doing very useful work by bringing the schools closer to them and by refreshing the knowledge of trained teachers.² But they have not or they cannot take care of a large body of trained teachers, whose academic attainments are not very high. The in-service education of trained teachers, already serving in schools, is not within their purview. While the existing programmes should be continued and further expanded, the needs of these two types of teachers cannot be ignored and a comprehensive plan will have to be launched for bringing them up to the mark.

Unqualified Teachers.—As many as 11,96,111 teachers are working in our primary schools today. The academic background of these teachers also is not very high. Of the total number of teachers, 22,970 (1.9 per cent) are below middle pass, 594,354 (49.7 per cent) middle, 4,93,682 (41.2 per cent) matriculates, and 85,167 (7.1 per cent) are above matriculates or in other categories.³

The position is also not very happy at the middle school stage too. A large percentage of teachers are below matriculates. It is very high for rural areas, and approximately 25.8 per cent of teachers, working in local bodies, are in this category.⁴ The number of such teachers is negligible at the secondary stage. There are only 871 such teachers.⁵

1. *Kothari Commission's Report.* p. 73.

2. *Supra.* Chapters II and VI.

3. NCERT. *Second All-India Educational Survey.* *op. cit.* p. 69.

4. *Ibid.* p. 74.

5. *Ibid.* p. 79.

It has been universally recognised in the country that the 'Matriculation Pass' should be the minimum qualification for a school teacher. But what is to be done with that large army of teachers, who have already been employed? A fair proportion of them have a long record of service. They cannot now be thrown out of their jobs. The only alternative is to make them pass the High School Examination, as private candidates. Suitable correspondence courses should be arranged for them. It should be one of the obligation of the State Institutes to undertake this job.

There are as many as 2,77,137 teachers at the secondary stage. Their qualifications, however, vary. The relevant information is given below :

TABLE 40

SECONDARY TEACHERS ACCORDING TO EDUCATIONAL QUALIFICATIONS*

<i>Sr. No.</i>	<i>Qualifications</i>	<i>Number</i>	<i>Percentage to Total</i>
1. Below Matric		871	0.3
2. Matriculate		24,247	8.7
3. Intermediate		14,546	5.2
4. Graduate		1,51,649	54.7
5. Post-graduate		57,353	20.7
6. Others		28,471	10.3
Total		2,77,137	100.00

*NCERT. *Second All-India Educational Survey*. New Delhi, 1967. p. 79.

In the present educational world, it will be very necessary to raise the academic attainments of the various categories of secondary teachers. The undergraduates should be encouraged to become graduates, and several universities do permit teachers to pass the B.A. examination as private candidates.

With the establishment of the higher secondary schools, the country is facing an acute shortage of post-graduate teachers. Promising youngmen are not attracted to the teaching profession. The only solution is to encourage the existing graduate teachers to go through M.A./M.Sc. courses. It may not be possible for teachers' colleges to conduct these programmes, but certainly it is within the purview of the universities to arrange them. This can be done through a number of Summer Courses, on the lines of American universities.

Even some of the post-graduate teachers can take advantage of these programmes, since they might not have proper qualifications to teach such school subjects for which there is a demand.

Trained Teachers

Of the total number of 5,06,860 untrained teachers in the country today, as many as 3,14,625 are working in primary schools, 1,07,908 in secondary schools, and the remaining *i.e.*, 84,327 are serving in secondary schools. These teachers belong to different age-groups. The relevant information is given below :

TABLE 41
UNTRAINED TEACHERS IN SCHOOLS*

<i>Age in years</i>	<i>Primary</i>	<i>Middle</i>	<i>Secondary</i>
Less than 20	22,550	7,465	7,465
20—24	1,06,713	33,445	33,445
25—29	83,074	29,797	29,797
30—34	39,808	15,924	15,924
35—39	24,259	9,207	9,207
40—44	14,195	4,823	4,823
45—49	9,973	3,132	3,132
50 and more	13,906	4,106	4,106

*NCERT. *Second All-India Educational Survey*. 1967. pp. 71.

There is an urgent need for providing diversified programmes for the untrained teachers. While the teachers under forty should undergo regular training, short courses can be arranged for teachers above the age of forty. The teachers of the first category can take advantage of the newly instituted Correspondence Course,¹ but the admission to these should be restricted only to teachers in the age-group of 35-40.

Finances

The implementation of even some of the main recommendations for the improvement of teacher education will involve a good deal of expenditure of money. It is assumed that teacher education would be entirely free, and that the trainees would not be charged any tuition fees. It is also hoped that every trainee will draw a monthly stipend—Rs. 75 in a post-graduate training college and Rs. 50 in an undergraduate training institution.

1. *Supra*. Chapter. 10

Given the proper and adequate staff and appointed in suitable scales or salary the total recurring expenditure for an elementary teacher training school with a strength of 200 students and a B.Ed. college with 100 trainees will be Rs. 2,41,200 and Rs. 2,00,000 respectively. The expenditure has been based on the targets fixed by the Mukerji Committee's Report for an elementary teacher training institution, and by the B.Ed. Syllabus Committee for a secondary training college. According to a very conservative expenditure, the average per capita expenditure for training a secondary teacher and an elementary teacher will be respectively Rs. 1,000 and Rs. 600 per year.¹

NEED FOR INTEGRATION

These are some of the suggestions for improving teacher education in this country. But if I have to recommend one single reform in the field of teacher education, I would lay the greatest stress on 'integration'. In my opinion, no significant improvement in teacher education is possible unless there is integration. It can introduce singleness of purpose, avoid duplication of efforts, bring in order out of chaos, and vitalise teacher education. It alone can create confidence amongst teacher educators, and the educational world.² It has several aspects—administrative, institutional and instructional.

For administrative integration, it will be very necessary to have one single agency responsible for teacher education, both at the central and state levels. This is why the institution of a National Council of Teacher Education has been suggested at the national level, and a State Council of Teacher Education at the State level.

Institutional integration can be achieved, if different branches of teacher education are not treated as separate fields. In fact, our teacher training institutions have lost greatly in effect and utility because they are wrongly divided into water-tight compartments on the basis of the stage of education for which they prepare teachers. It is an extremely wrong policy to compartmentalise teacher education programmes at different levels—pre-primary, primary, secondary and so on. It should be realised that just as the education of a child is a total process, teacher education also needs to be reviewed as an integrated whole. This is why it has been suggested to establish comprehensive colleges of education and schools of education and to bring the entire field of teacher education within the purview of one single body, viz., the State Council of Teacher Education.

1. S. N. Mukerji. *Administration and Organisation of Teacher Training Institutions*. New Delhi. NCERT, 1965. pp. 45.

2. N. Mukerji. *Presidential Address : Tenth Conference of the I.A.T.E*. Bhubneswar, 1967. p. 5.

There are several approaches for securing integration of instructional programmes. For example the under-graduate and four-year degree courses are to be based on three broad areas—General Education, specialised education and professional education. The new B.Ed. syllabus aims at interlinking 'Content' and 'Method' courses. The suggested M.A. course is expected to combine education with one other subject selected from a wide range in humanities and the sciences.

Instructional programmes will also have to be geared to the social needs. It is often and rightly pointed out that there is a lag between what teachers need and what they actually receive in preparation for their tremendously important teaching assignments. When our trainees return to their schools at the beginning of the school year with a notebook full of ideas, they meet immediate opposition from some principals, who inform them that "we don't do things that way in this school". This remark is often true, because our programmes are often out-of-date and do not meet the actual needs of the society, where the teachers have to work. It will be very necessary for teacher training institutions to keep themselves in close contact with the community. If they are informed, what skills (now lacking) are needed in pre-service training they could become involved with the changing structure of the community and its evolving needs. An experiment in this direction is being made by some of the American colleges of teacher education. They have been working very closely with school system : deans and departmental chairmen (inter-disciplinary) have gone into schools and the community to work with teachers and parents, and the things they have learned are invaluable to them in helping to institute vast changes in the approach to teacher education.

LOOKING AHEAD

When the present position is viewed in its proper historical perspective, it seems reasonable to conclude that the entire system of teacher education suffers from arrested development ; it has failed to keep pace with the changes—social and political, economic and industrial which have gone to the making of modern India and it has failed to keep abreast of the latest developments in educational theory and practice. It should, however, be admitted that India has been well served by expert advice but despite the recommendations of various committees, commissions and working groups, little has been done to adapt an outworn system to the conditions of modern life. Indeed, it is only a slight exaggeration to say that a teacher training institution with a few notable exceptions is much the same today as it was in 1949 and but little changed from what it was as far back as 1909.

In fact, a distinct deterioration has set in. The earlier teachers' colleges had extensive compounds, stately buildings, well-equipped libraries and laboratories. Their staff was adequate and properly

qualified. As against this, we find that the majority of training colleges of this country are suffering from a lack of laboratory facilities, teaching aids, and equipment. A survey of 244 institutions reveals that 68 of them are housed in rented buildings, only 37 have their own science laboratories, and only 144 have their own demonstration schools. No doubt, some of the institutions are housed today in palaces or fortresses, but some of them are located in stables too.¹ But a rented building or a palace or a stable has certainly not been designed to meet the requirements of a teacher training institution.

This deterioration has set in mainly due to the indifference, lethargy and negative attitude of Government and the universities. Both the Central and State Governments accepted a number of suggestions made by various committees and commissions. But they are yet to be implemented.

Equally painful is to note the negative attitude showed by a large number of responsible officials towards teacher education. They hold that teachers are born and that they need no training. In 1950 when the First Conference of the Principals of Secondary Training Colleges in India (the present Indian Association of Teacher Educators) was held at Baroda, one of the delegates, who was outspoken in her language, described the teacher educators as Harijans among Harijans. In contrast to the ordinary teachers who were described as Harijans. The appropriateness of this description can be realised when we notice that the University Grants Commission, which came into existence more than ten years ago has almost completely neglected teachers' colleges and the Ministry of Education and the State Governments have paid scant attention to them. Consequently teachers' colleges have made practically no progress at all. It is only in the Fourth Plan that the Planning Commission has recognised Teacher Education as an independent and separate section of education and earmarked certain sums for it.

It is also depressing to note that a fair proportion of government institutions are not up to the mark, and some of the University Departments of Education are below average. In fact, the government and university institutions should serve as 'models' to the entire country. But they are not what they should be.

This dictatorial attitude is at its worst level, when one finds that government and universities are not only indifferent to the rules and regulations framed by themselves but are influenced by pressure groups. This may do in other fields, but certainly not in education. In this connection, I would like to quote from the reminiscences of a veteran teacher educator who was also an educational administrator. He writes :

1. S.N. Mukerji. 'Presidential Address'. Ninth Conference Report, Triandrum. IATE, 1966. p. 28.

Two interesting incidents come to my mind. When I was Principal of the Teachers College at Mysore, an attempt was made to start a private teachers college. As usual the University appointed an Inspection Committee and the report of the Committee was strongly against the starting of the new college because of serious deficiencies in accommodation, equipment, library and other facilities. And yet the University in its wisdom sanctioned affiliation and since the college was started 2 months late a separate B.Ed. Examination was held only for that college. Even after 11 years the Institute is still being run in a rented building with many of the shortcomings still unredressed. When I was the Director of Public Instruction an attempt was made by a private organisation to start a T.T.I. for primary school teachers. The Deputy Director of Public Instruction in charge of the area was requested to visit the place and submit a report. His report was strongly against the proposal because there was nothing by way of facilities regarding accommodation, equipment, library etc. Consequently, permission was not granted. And yet the management started the T.T.I. and ran the Institution. When the time came for sending application for the Public Examination at the end of the year the Examination Board refused to accept the applications from this T.T.I. because it had not been recognised. A writ petition to the High Court followed and the High Court in its wisdom ordered that the applications should be received. What was the result? Not even one student from the institution passed in the Examination.¹

Numerous such instances can be quoted. They clearly indicate that the leadership for the improvement of teacher education cannot solely rest either with the government or with the universities. A large responsibility will have to be shared by the Indian Association of Teacher Educators. It is the only recognised professional organisation for teacher educators, and its primary responsibility is to provide educational leadership and strengthen the profession. The world experience has shown that not the outsiders but only the organised profession can improve standards. It has to take initiative, draw comprehensive plans, and to place them before the administrators for execution. But the implementation cannot be left to chance. The Association has to exert itself, and see that its developmental programmes are properly put into action.

As the leadership of the Association continues to be exerted towards professional improvement, new approaches must be found for

1. A.C. Deve Gowda. "Reminiscences of a Teacher Educator", *Journal of Education and Psychology*. Vol. XXV. No. 3 October, 1967. p. 232.

APPENDIX ONE

ADMISSION REQUIREMENTS AND DURATION OF COURSES— ELEMENTARY TEACHER TRAINING INSTITUTIONS

Sr. No.	States/Union Territories	Primary Stage			Middle Stage			Remarks
		Courses	Duration	Admission Requirements	Courses	Duration	Admission Requirements	
1	2	3	4	5	6	7	8	9
1.	Andhra Pradesh	Elementary Grade/Junior Basic	2 years 1 year (for Telengana existing Teachers)*	Middle pass or S.S.L.C.	Secondary Grade/Senior Basic	2 years 1 year (for Telengana existing teachers)	Matric PUC, Inter, Matric with above 50 per cent marks	
2.	Assam	Junior Basic	1 year	Middle passed*	Senior Basic	1 year	High School pass	*Prescribed High School Leaving Certificate.
3.	Bihar	Primary/Junior/Trained	2 years*	Matric	Same	as for Primary		*For experienced teachers 6 months to one year.
4.	Gujarat	Primary Teachers Certificate	2 years 1 year	P.S.C. passed S.S.C. passed	Senior Trained	2 years	S.S.C. passed.	

1	2	3	4	5	6	7	8	9
5.	Jammu and Kashmir	Primary Teachers D.T.	1 year	Matric (Mcn) Middle pass for women		Same as for Primary.		
6.	Kerala	Primary Teachers Certificate	2 years	S.S.L.C.	Upper Primary	Same as for Primary.		
7.	Madhya Pradesh	Basic Certificate	2 years	H.S.S./VIII class for women.	Diploma in Teaching	2 years	H.S.S. for departmental candidates and Inter for private candidates	
8.	Madras	Higher Ele. Grade/Junior Basic	2 years	Form III* Std. VIII	Sec. Grade/ Senior Basic	2 years	S.S.L.C. Matric	*Passed Elementary School Leaving Certificate Examination.
9.	Maharashtra	Junior P.T.C.	2 years 1 year	P.S.C. S.S.C.	S.T.C./T.D. Dip. T. D.Ed. Sr. P.T.C.	1 year for Secondary Middle schools and 2 years for Primary Middle schools.	Matric/S.S.C.	
10.	Mysore	Teacher Certificate Lower	2 years 1 year	Middle School pass High School	Teachers Certificate Higher	1 year	S.S.L.C.	

1	2	3	4	5	6	7	8	9
11.	Orissa	Elementary Teachers Certificate	2 years	Middle passed	Secondary Teachers Certificate	2 years	S.S.L.C.	
12.	Panjab	J.B.T. (Elementary School Teachers)	2 years	Matric	Same as for Primary			Matric second division with Eng. III class for Women/ S.C. and S. Tribes.
13.	Rajasthan	B.S.T.C.	1 year	Matric	Same as for Primary			
14.	Uttar Pradesh	Junior Basic Teachers	2 years	VIII preference to High school pass	Middle School Teachers	2 years	Matric, preference to Inter.	
15.	West Bengal	1. Primary Teacher Men/Women 2. Junior Basic (M/W) 3. Senior Training (W)	1 year plus 6 months of field work	Matric	Sr. Basic Trg. Colleges (M/W)	1 year	Inter or Higher Secondary	*Men 20 per cent Teachers 86%
16.	Delhi	J.B.T.Dip.	2 years	High School/ Hr. Sec. II class	Same as for Primary.			

APPENDIX TWO

TEACHER EDUCATORS—QUALIFICATIONS, EXPERIENCE, SALARY SCALES— ELEMENTARY TRAINING INSTITUTIONS IN DIFFERENT STATES (Undergraduate)

Sr. No.	Name of the State/ Union Territory	Minimum Qualifications					Pay scales
		Category of Teachers		Academic and Professional		Teaching experience required	
1	2	3	4	5	6		
1.	Andhra Pradesh	(A) Head of Institution.	B.A., B.Sc., etc. B.Ed./B.T.	Not prescribed but usually seniors will be heads of institutions	Rs. 325-700 (if in APES)		
		(B) Teaching Assistants	-Do-		Rs. 200-400 Grade I Rs. 130-250 Grade II Rs. 130-250 Grade III		
2.	Assam	(A) Heads of Institutions	Trained Graduate	Sufficient experience of teaching (period not mentioned)	Rs. 350-1,000 (Superintendent, Normal School/Principal, Basic Trg. College, Rs. 350-925 (for Principal Basic Centre), Rs. 200-500.		
3.	Bihar	(B) Assistant Teacher	-Do-	...	Rs. 325-935.		
		(A) Heads of institutions	Post-Graduate or Graduate and trained B.Ed., Dip. in Edn. or M.Ed.	They must be in class II Bihar Educational Service.			
4.	Gujarat	(B) Teaching Assistants	-Do-	N.A.	N.A.		
		(A) Heads of institutions	Basic Trained Graduate 5 years		Rs. 220-650 Class II		
		(B) Teaching Assistants	-Do-	...	Rs. 120-370 Class III		

1	2	3	4	5	6
5. Kerala	(A) Heads of Institutions.	Graduation, B.T. or B.Ed. Post-Graduate/ Dip. in Basic Edn.	1st Grade assistants are posted as Heads of institutions. Ordinarily a 1st grade assistant will have more than 5 years' experience.	Rs. 150—250.	
	(B) Teaching Assistants	-Do-	Experienced (Teaching) I Grade II Grade	Rs. 150—250 Rs. 80—165	
6. Madhya Pradesh	(A) Heads of institutions	B.A., B.Ed.	Departmental Seniority	Rs. 277—700, Selection Grade Rs. 360—700 Rs. 250—450	
	(B) Teaching Assistants	-Do-	-Do-		
7. Madras	(A) Heads of institutions	(a) Degree with B.T./ B.Ed. (b) SSLC with training certificate	—	(a) Rs. 300—800 (Gazetted) Rs. 225—350 (b) Rs. 140—250	
	(B) Teaching Assistants	-Do-	—	(a) Rs. 140—350 Grade I (b) Rs. 140—250 Grade II (b) Rs. 80—140	
8. Maharashtra	(A) Heads of Institutions	B.A./B.Sc., B.Td./B.Ed.	5 years post/B.T. 10 years Post/STC teaching experience	No definite pay scales have been prescribed since STC classes are run on part-time bases.	-Do- Rs. 250—500 Rs. 200—250
	(B) Teaching assistants	-Do-	-Do-		
9. Mysore	(A) Heads of Insts. (B) Teaching assistants	M.A., B.T. or M.A., B.Ed. -Do-	5 years -Do-		

1	2	3	4	5	6
10.	Panjab	(A) Heads of Insts. (B) Teaching Assistants (i) Senior scale (ii) Routine scale	M.Ad., M.Ed. or B.Ad., B.Ed. B.A., B.Ed./M.Ed. -Do-	8 years 5 years 3 years	(a) Rs. 250—750 (Gazetted) (b) Rs. 250—350 (non-gazetted) (i) Rs. 250—300 (ii) Rs. 110—250.
11.	Rajasthan	(A) Heads of Institutions (B) Teaching Assistants	Trained Graduates with specialisation in Basic Education. -Do-	5 years of teaching in secondary schools. 3 years of teaching experience in High school or 5 years as headmaster in Middle schools.	Rs. 285—540 Rs. 170—335
12.	Uttar Pradesh	(A) Heads of Institutions	II class degree preferably post-graduate with L.T. or other degree/Dip. in Education.	3 years experience of edl. work.	Rs. 250—500
13.	West Bengal	(B) Teaching assistants (A) Heads of Institutions (B) Teaching Assistants	For L.T. Grade—a trained graduate (a) Rs. 160—295 Rs. 210—450 (b) Rs. 175—325 Rs. 225—465	... ...	Rs. 120—300 Rs. 50 special pay in the grade of the institution.

(a) For private institutions.

(b) For Government institutions.

APPENDIX THREE

NUMBER AND PERCENTAGE OF TRAINED AND UNTRAINED TEACHERS IN PRIMARY AND MIDDLE SCHOOLS IN DIFFERENT STATES, 1965-66

Sr. No.	States/Union Territory	Middle Stage			Primary Stage		
		No. of trained teachers per cent to Total	No. of untrained teachers per cent to the Total	Total No. of Teachers	No. of trained teachers per cent to the Total	No. of untrained teachers per cent to Total	Total No. of Teachers
1	2	3	4	5	6	7	8
1.	Andhra	12,571 (80.46)	3,052 (19.54)	15,623	77,871 (90.02)	8,630 (9.98)	86,501
2.	Assam	3,310 (22.4)	11,500 (77.6)	14,810	20,573 (55.0)	16,927 (45.0)	37,500
3.	Bihar	23,854 (72.5)	9,064 (27.5)	32,918	82,467 (82.7)	17,196 (17.3)	99,663
4.	Gujarat	51,360 (61.4)	32,280 (38.6)	83,640	Included under Middle Stage.		
5.	Jammu and Kashmir (a)	1,855 (54.2)	1,612 (45.8)	3,467	2,631 (54.0)	2,240 (46.0)	4,874
6.	Kerala	32,600 (82.7)	6,806 (17.3)	39,406	56,129 (93.0)	3,574 (7.0)	59,703
7.	Madhya Pradesh	20,132(b) (72.0)	7,820(b) (28.0)	27,951(b)	54,327 (80.0)	13,582(b) (20.0)	67,909(b)

1	2	3	4	5	6	7	8
8.	Madras(c)	55,339 (93.1)	4,101(b) (6.9)	59,440(b)	74,109 (96.7)	2,529(b) (3.3)	76,638(b)
9.	Maharashtra	1,12,500 (74.8)	39,000 (25.2)	1,51,500	Included under Middle Stage.		
10.	Mysore	54,874 (59.9)	37,078 (40.1)	91,952	Included under Middle Stage.		
11.	Nagaland	...	...	...	332 (20.0)	1,326 (80.0)	1,658
12.	Orissa	3,200 (31.0)	7,122(b) (69.0)	10,322	29,000 (60.0)	19,339(b) (40.0)	48,339(b)
13.	Panjab (c)	13,122 (88.0)	1,789(b) (12.0)	14,911(b)	31,028 (89.0)	3,835(b) (11.0)	34,863(b)
14.	Rajasthan	13,030 (71.0)	5,470 (29.0)	18,500	31,200 (75.0)	10,400 (25.0)	41,600
15.	Uttar Pradesh	40,760 (87.06)	6,059 (12.94)	46,819	1,19,400 (73.48)	43,072 (26.52)	1,02,472
16.	West Bengal(d)	1,962 (16.3)	10,079 (83.7)	12,041	37,679 (38.3)	60,627 (61.7)	98,306
<i>Union Territories</i>							
1.	A. and N. Islands	14,520(e) (100.0)	Nil	14,520(e)	Included under Middle Stage.		
2.	Delhi						
3.	Dadra and Nagar Haveli	47 (57.0)	35 (43.0)	82	27 (35.0)	50 (65.0)	77

1	2	3	4	5	6	7	8
4.	Goa, Daman and Diu	34 (30.0)	81 (70.0)	115	730 (25.0)	2,141 (75.0)	2,871
5.	Manipur	322 (22.0)	1,113 (78.0)	1,435	1,748 (24.0)	5,596 (76.0)	7,274
6.	Pondicherry	464 (76.7)	141 (23.3)	605	1,065 (74.2)	371 (25.8)	1,436
7.	Tripura	600 (48.8)	629(b) (51.2)	1,229(b)	1,789 (39.4)	2,740(b) (60.5)	4,529(b)

(a) Figures relate to 1961-62. Taken from the Memoranda of the State Government.

(b) Figures are estimated.

(c) Figures relate to 1964-65.

(d) Figures relate to 1963-64.

(e) Includes both Middle and Primary.

APPENDIX FOUR

ACTIVITIES OF THE STATE INSTITUTES OF EDUCATION

Sl. No.	Programmes	States completed with dates	States in which it is in operation with dates	Remarks
1	2	3	4	5
I Research				
	1. Investigation into the method of teaching of various subjects			
	(i) Maths			A.P.—data being analysed Period Nov. 1964 to March 1965 (Srinagar Conference Report).
	(ii) Science			Mysore (along with Social Studies, Mother tongue) Period Nov. 1964 to March 1965 (Srinagar Conference Report).
	(iii) Social Studies			
	(iv) Reading and writing at the elementary stage			J & K (analysis and data being done), U.P. Period 1964 to Dec. 1964 (Srinagar and Bangalore Report).
	(v) Study of vocabulary used in language for standard I and II	Maharashtra Period Nov. 1964 to March 1965. (Srinagar Conference Report).	Mysore (along with Mother tongue) Period 1964-65. (Sohore Conference Report).	
	(vi) Study of crafts			A.P. (data analysed) Period Nov. 1964 to March 1966. (Srinagar Conference Report).

1	2	3	4	5
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(vii) Survey of words common to Urdu and Kashmiri and their suitability for Primary classes.

J & K (analysis being done) Period November, 1964 to March 1965. (Srinagar Conference Report).

(viii) Teaching of English or Mother-tongue.

(ix) Status of teaching of Social Studies and General Science.

Rajasthan. Period November 1964 to March 1965. (Srinagar Conference Report).

2. Studies relating to the field of inspection and supervision

(i) Study of work load of Supervisor

A.P. (data collection completed) Period November 1964 to March 1965. (Srinagar Conference Report).

(ii) Study of Inspection reports.

Bihar (report being analysed. Period 1964 to March 1965. (Srinagar Conference Report).

(iii) Study of competence of Tehsil Inspecting Officer.

J&K (Period November 1964 to March 1965 (Srinagar Conference Report).

(iv) Study of Methods of Inspection in Primary Schools.

Orissa (analysis being done) Period November 1964 to December 1965. (Srinagar and Bangalore Conference Report).

(v) Development of proforma for inspection of primary schools and for grading them.

(vi) Survey of the inspection of urban primary schools made by the Education Extension Officer by Panchayat Samittee.

(vii) Survey of the inspections of middle and primary schools by Dy. Inspectors of the schools.

3. Studies pertaining to problems of elementary schools, and school organisation and health organisation

(i) Study of time-table

(ii) Study of stagnation and wastage

Mysore

Period July 1965 to December 1965.

(Bangalore Conference Report).

Rajasthan

Period July 1965 to December 1965 (Bangalore Conference Report).

Rajasthan

Period July 1965 to December 1965 (Bangalore Con. Report).

Bihar

Period November 1964 to March 1965 (Srinagar Conference Report).

Bihar (data analysed) Period November 1964 to December 1965 (Srinagar and Bangl. Conference Report), Maharashtra, Rajasthan and U.P., Period November 1964 to March 1965 (Srinagar Conference Report).

*Under this study the following sub-studies of the wastage are :
1. Cost of Edn. to parent pupils undergoing free and Comp. Inst. in Prim. Schools.
2. Methods utilized by teacher for adjustment of new entrants to schools in Standard I.

1	2	3	4	5
	(iii) Study of problem of single teacher with multiple classes and to devise better method.		U.P. Period, November 1964 to March 1965 (Srinagar Conference Report) Orissa Period July 1965 to December 1965. (Bangalore Conference Report).	
	(iv) An investigation into the absenteeism in elementary schools.	Nearly completed by Orissa (report is being published) Period July 1965 to December 1965 (Bangalore Conference Report).	A.P. Period 1964-65 (Sohore Conference Report).	
	(v) Detailed survey of educational activities.		Started by Bihar (Sohore Conference Report).	
	(vi) Survey of primary schools		Orissa Period November 1964—March 1965 (Srinagar Conference Report).	
	(vii) Study or Survey on Library regarding their use, position etc., in middle schools.	J & K Period 1964 to March 1965 (Sohore and Srinagar Conference Report).	Kerala Period November 1964 to March 1965 (Srinagar Conference Report).	
	(viii) Study of reaction of teachers, administrators, parents, etc., towards corporal punishment.		Panjab Period 1964-65 (Sohore Conference Report).	
	(ix) Study of health habits of boys and girls of age group 6 to 11 Years in rural and elementary schools.		A.P. (data being analysed) Period November 1964 to March 1965 (Srinagar Conference Report).	

1	2	3	4	5
	(x) Study of physical facilities in elementary schools.			A.P. (data analysed) Period November 1964 to March 1965. (Srinagar Conference Report).
	(xi) Grading of elementary schools.	A.P. Period Nov. 1964 to Dec. 1965 (Srinagar and Bangalore Reports)		Mysore (Period November, 1964 to March 1965). (Srinagar Conference Report).
	(xii) Study of problems of teachers training schools.		Punjab Period July 1965 to December 1965. (Bangalore Report), Rajasthan Period November 1964 to March 1965 (Srinagar Conference Report).	
	(xiii) Fourteen studies have been taken up for suggesting remedial measures for various deficiencies noticeable in the teaching learning situation in the elementary schools.			A.P. Period July 1965 to December 1965. (Bangalore Conference Report).
	(xiv) Study of ancillary services in elementary schools.			M.P. Period July 1965 to December 1965. (Bangalore Report).
	(xv) Study of inter personal relationship in the staff in schools.			M.P. Period July 1965 to December 1965 (Bangalore Conference Report).

(xvi) Study of organisation of co-curricular activities in elementary schools with special emphasis on pupil participation. Intensive study of 30 primary schools.

(xvii) Study of the functioning of the Teachers' Associations or organizations in the state.

(xviii) Study of problem children and bright children with the help of class teachers.

(xix) Study of the staff relationship in schools.

(xx) Three hour school scheme for primary schools.

4. Studies relating to Primary School Teachers/Elementary Teacher Educators

(i) Socio-economic condition and preparation of teachers.

(ii) Teachers qualifications and Work Road.

Maharashtra
Period November, 1964
to March 1965.

M.P.
Period of July to December 1965. (Bangalore Report).
Mysore, Period July to December 1965.

Mysore.
Period July to December 1965
(Bangalore Report).

Punjab
Period July to December 1965
(Bangalore Report).

Rajasthan
Period July 1965 to December, 1965. (Bangalore Report).

Rajasthan
Period July 1965 to December 1965. (Bangalore Report).

1	2	3	4	5
	(iii) Service condition of Teacher Educators.			
	(iv) An investigation into the problems of teachers under training and their reactions to present training programme.			Mysore (Sohore Conference Report).
	(v) A survey of the academic and training qualifications of graduate secondary teachers of Poona District and their correlation with the subjects actually taught by them in their schools.	Completed by Maharashtra, Period November 1964 to December 1965.		Gujarat (Sohore Conference Report).
	(vi) Study of socio-economic conditions of women teachers			Rajasthan, Period November 1964 to March 1965. (Srinagar Report).
	(vii) An investigation into the problems of teacher educators at the primary level.			Orissa (data being collected). Period July 1965 to December 1965. (Bangalore Conference Report).
	(viii) Study of problems of lady teachers.			Orissa, Period July 1965 to December 1965. (Bangalore Report).

5. Construction and Standardisation of achievement test in various subjects and intelligence test.

(i) Social Studies

Kerala
Period November 1964 to March 1965.
(Srinagar Report).

(ii) Mathematics

Do.

Rajasthan
Period 1964-65.
(Sehore Report).

Punjab
Period November 1964 to March 1965.
(Srinagar Report).

(v) Preparation of a non-verbal group test of intelligence for the age group 13 to 14.

Started by Kerala, period November 1964 to March 1965.
(Gujarat Report).

(vi) Study of achievement of bright children at the middle stage and its relationship with future performance.

Punjab
Period July 1965 to December 1965.
(Bangalore Report).

1	2	3	4	5
	(vi) Diagnostic test in spelling and (Panjabi Language) for the 4th/5th Standard.			
6.	Study in relation to elementary training schools/pre-primary training schools or training colleges.			
	(i) Working of teacher training schools.	Completed by J. & K. Period November 1964 to March 1965.		Punjab Period July 1965 to December 1965. (Bangalore Conference Report).
	(ii) Status study of primary teachers training schools.	Completed by Maharashtra Period November 1964 to March 1965.		
	(iii) Status study of secondary training colleges	-Do-		
	(iv) Status study of pre-primary training schools.	-Do-		
	(v) Study of elementary teacher training schools			Gujrat (questionnaires prepared, data collected) Srinagar Report Period November 1964 to December 1965 (Bangalore Report).
	(vi) Survey of primary teacher training institutions.			Mysore, Punjab Period November 1964 to March 1965 (Srinagar Conference Report).
	(vii) Action research projects introduced in the primary schools and teacher training institutions.			Punjab Period November 1964 to March 1965 (Srinagar Conference Report).

(viii) A case study of a training school.

(ix) Training School Building

(x) Study of the cost of equipment of schools.

Completed by A.P. Period July 1965 to December 1965. (Bangalore Conference Report)

(xi) Case study of 15 typical primary teacher training institutions.

Maharashtra Period July 1965 to December 1965. (Bangalore Report).

(xii) Sample survey of teachers training schools.

Punjab, (Report is being prepared) Period July 1965 to December 1965 (Bangalore Conference Report).

(xiii) Experiment on teacher training.

Rajasthan, Period July 1965 to March 1965 (Bangalore Report).

(xiv) Status finding of elementary training institutions.

U.P., Period July 1965 to December 1965. (Bangalore Conference Report).

Rajasthan Period November 1964 to March 1965 (Srinagar Report).

Commission studies (See in Commission Studies on page 15).

1	2	3	4	5
	<p>7. Study or Survey in connection w/in children's literature and other publication work</p> <p>(i) Survey of educational literature and children's literature in Marathi.</p> <p>(ii) Survey of books on education in Oriya language.</p> <p>(iii) Study of the nationalised text-books (classes I to V in Hindi).</p> <p>(iv) Study of books by Indian authors for use in teacher training institutions.</p>			<p>Maharashtra started. Period November 1964 to March 1965. (Srinagar Conference Report).</p> <p>Orissa. Period November 1964 to March 1965. (Srinagar Report).</p> <p>Rajasthan. Period November 1964 to March 1965. (Srinagar Conference Report).</p> <p>Orissa. Period November 1964 to March 1965. (Srinagar Report).</p> <p>M.P. Period July 1965 to December 1965. (Bangalore Report).</p> <p>M.P. Period July 1965 to December 1965. (Bangalore Report).</p> <p>Completed by Maharashtra. Period November 1964 to December 1965.</p>
	<p>8. Evaluation Studies</p> <p>(i) Evaluation of basic programme activities in the primary schools.</p> <p>(ii) Study of testing procedures in elementary schools.</p> <p>(iii) Diagnosis of errors in Mathematics and Hindi.</p> <p>(iv) Assessment of the teaching of science in 40 primary schools.</p>			

(v) Preparation of evaluative criteria for gradation of primary schools.

(vi) Evaluation of the orientation of primary schools into Basic pattern.

9. Study of attitude of trainee teachers to the training programmes

(i) Attitudes of primary school teachers towards inspection, administration and supervision.

10. Studies in other fields of Education

(i) Study of Centre Meetings in the District of Prasi and Kalahandi.

(ii) Teacher pupil data of schools in Adivasi area.

(iii) Study of Panchayat Samittee at Khamnore.

(iv) Study of a multipurpose higher secondary school.

Maharashtra
Period July 1965 to December 1965.

(Bangalore Report).

Orissa
Period July 1965 to December, 1965.

(Bangalore Report).

Started by Mysore.
Period November 1964 to March 1965.

(Srinagar Report).

Orissa
Period November 1964 to March 1965.

(Srinagar Report).

Orissa
Period November 1964 to March 1965.

Rajasthan, (Report published)
Period November 1964 to March 1965.

(Srinagar Report).

Rajasthan (Research design prepared).

Period November 1964 to March 1965. (Srinagar Report).

(v) Case studies of six selected elementary and higher secondary schools in respect of their school-community relationship.

(vi) Study of the self-expression of student of class I to III.

(vii) Study of training programmes as viewed by teacher educators.

(viii) A project on language improvement was planned to be implemented in VII standard of the practising schools of P. R. Training College for Men, Ahmedabad.

(ix) Study of school community relations.

(x) Reaction of primary teacher trainees to the training programme.

(xi) Study of notes, functions, work-load and training need of the educational extension officers for serving under Zila Parishad.

Rajasthan
Period November 1964 to March 1965.
(Srinagar Report).

Bihar
Period July 1965 to December 1965.
(Bangalore Report).

Nearly completed by Gujarat
(Report is being completed)
(Bangalore Conference Report).

Started by Gujarat, Period July 1965 to December 1965.
(Bangalore Conference Report).

Started by M.P., W. Bengal
Period July 1965 to December 1965.
(Bangalore Conference Report).
Maharashtra
Period November 1964 to December 1965.
(Srinagar and Bangalore Report).
Maharashtra
Period March 1965 to December 1965.
(Bangalore Report).

- (xii) Use of craft as a medium of education.
- (xiii) Study of existing position of craft teaching in teacher training institute.
- (xiv) Study of Centre Meetings.
- (xv) Study of working of Agricultural farms attached to training schools.
- (xvi) Revision of the syllabus for classes V to VIII in the State of Rajasthan.
- (xvii) A Study of fall in enrolment in certain Panchayat Samities of Rajasthan.
- (xviii) Educational Survey of five districts.
- Maharashtra
Period March 1965 to December 1965.
(Bangalore Report).
- Mysore
Period July 1965 to December 1965.
(Bangalore Report).
- Orissa (Report is being prepared).
Period July 1965 to December 1965.
(Bangalore Report).
- Rajasthan,
Period July 1965 to December 1965.
(Bangalore Report).
- Rajasthan,
Period July 1965 to December 1965.
(Bangalore Report).
- Rajasthan,
Period July 1965 to December 1965.
(Bangalore Report).
- U.P. (data analysed).
Period July 1965 to December 1965.
(Bangalore Report).

1	2	3	4	5
	(xix) Project on 'Beginning Reading'.			U.P. Period July 1965 to December 1965. (Bangalore Report).
	11. Studies given by Commissions to all S.I.Es.			
	(i) Case studies of selected elementary schools.			A.P., Maharashtra, Mysore, Panjab, Rajasthan, W. Bengal. Period November 1964 to December 1965. (Srinagar and Bangalore Report)
	(ii) Statistical survey of selected district in Form A-2.			Rajasthan, Period November 1964 to December 1965. (Srinagar and Bangalore Report).
	(iii) Study of Unit costing at different stages of education.			Rajasthan, U.P., W. Bengal. Period November 1964 to December 1965. (Srinagar and Bangalore Report).
	(iv) Study of the grant-in-aid system.	Completed by A.P. (Bangalore Report).		

1	2	3	4	5
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II. Training

- (1) Seminar, In-service Training, Orientation, Seminar, Refresher Course, Meetings, Workshop etc.

of one week

by all S.L.Es. for principal, of teacher training institutes.

(Sohore Report).

A.P. (Supervisor, Teacher educators, officials and non-officials of Panchayati Raj), Mysore (Heads of primary schools and Headmasters of 53 training schools), Maharashtra (Two try-out meetings of educational extension officers, and one meeting of principal), Panjab (Block Education officers and Elementary Teacher Education), Rajasthan (Workshop for Art Instructor). Period Duration November 1964 to March 1965.
(Srinagar Conference Report).

A.P. (Course in Map Drawing for teachers of Social Studies) Period July 1965 to December 1965.
(Bangalore Report).

of two weeks

Gujarat (for supervisors and teacher educators).
Orissa (for Supervisors) Rajas-
than (for craft teachers of
training schools).
(Bangalore Conference Report).
Duration July 1965 to Decem-
ber 1965.

of three week

Orissa (for Science Teacher Edu-
cators).
Period November 1965 to March
1965.

(Srinagar Report).
Panjab (In-service training
course for B.E.O. and Teacher
Education).
Bangalore Report.

Period July 1965 to December
1965.

of four weeks

Panjab (for Block Education
officers and Elementary Tea-
cher Centres).
Period November 1964 to March
1965.

(Srinagar Conference Report).

Bihar (In-service training course
for Principals and Senior
teachers of training schools
from all over the States).
Gujrat (Refresher courses for
teacher educators of Basic
Training schools and 3 train-
ing courses for Asstt. Deputy

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4

5

Ednl. Inspectors), M.P. (In-service Course for school supervisors).

Maharashtra (In-service Training for Educational, Extension Officers and teacher educators), Mysore (Teacher Educators and Supervisors), West Bengal (In-service training course for ex-trainees of the Government, Senior Basic Training College, Banipur). Period July 1965 to December 1965.
(Bangalore Report).

of Five weeks

Rajasthan (in-service course for teacher educators and supervisors).
Period November 1964 to March 1965.

(Srinagar Conference Report).

of Six weeks

A.P. (in service training course for Teacher Educators and supervisors), U.P. (In-service course for Teacher Educators).
Period July 1965 to December 1965.

(Bangalore Report).

(2) Conference or Training or Seminar below one week.

Three days.

Bihar (for Inspectors).
A.P. (Seminar on Teaching of
Telugu in Primary Schools).

Five days.

Rajasthan (Training Course for
Headmasters of primary schools
Period November 1964 to March
1965.

(Srinagar Conference Report).
W. Bengal (For elementary
school teachers).
Period July 1965 to December
1965.

(Bangalore Report).

More than five days.

Bihar (Courses for Divisional
Superintendents and Superin-
tendents of Basic Educational
Block Education Extension
Officers).

Period July 1965 to December
1965.

(Bangalore Report).

(3) Courses or Training or Seminar
etc., without specific duration.

Gujarat (Refresher Courses in
teaching of language and
Mathematics for Elementary
school teachers), J & K (For
teacher educators and orien-
tation courses for new ele-
mentary teachers and District
Inspectors), M.P. (In-service
courses of Teacher educators
and supervisors), Mysore (Four
District Level Orientation

Seminars for supervisors and Teacher Educators and one state level seminar for supervisors and teacher educators). Orissa (Five orientation seminars for graduate Sub. Inspectors of schools and Head of elementary training schools, Basic Training Schools)

Rajasthan (For Science Teachers of middle schools of Udaipur District), U. P. (for Supervisors and Teacher Educators).

Period November 1964 to March 1965.

(Srinagar Conference Report).

M.P. (In-service Course for teachers of Elementary Training schools), Madras (Orientation Seminars for inspecting officers and teacher educators), Maharashtra (Orientation conference for Ednl. Extn. Officers), Orissa (for Teacher Educators in English), Rajasthan (Orientation Course for Science Teachers of Middle schools, 2nd Orientation course for headmasters of primary schools, seminar of elementary teacher education, Seminar for master plan

III. Extension

(1) Seminars

for elementary teacher education, Training Course for Directors of Extension Centres).

Gujarat (3 days Seminar for 13 districts, seminar of education writers, 4 days seminar for the inspectors and headmasters) Panjab (On Science Talent Search) Period November 1964 to March 1965. (Srinagar Conference Report).

Bihar (for one day for Headmasters of 25 elementary schools) Gujarat (at district level for one day).

M.P. (at district level for teacher educators and supervisors).

Rajasthan (Orientation to the Honorary Directors of the Extn. Centres).

U.P. (for inspecting staff).

W. Bengal (of Primary and Basic School teachers).

Period July 1965 to December 1965.

(Bangalore Report).

(2) Conference

Bihar (of elementary school teachers), Orissa (of Extension workers in the states under the auspices of the D.F.P.S.E. and the Conference with teachers of primary schools),

Panjab (of educational research workers).
Period November 1964 to March 1965.

(Srinagar Conference Report).
A.P. (Four days conference of Headmasters for their problems), Bihar (of inspecting officers), Gujarat (of educational workers of group centres as well as Extension Workers and meeting of Head masters along with staff of S.I.E. etc.), Mysore (of Head of Secondary Schools conducted by Regional College of Education Mysore and S. I. E. Dharwar and conference for Local Teachers), Orissa (for one day for teaching of Science in primary schools and one day conference for school teachers), West Bengal (of Heads of elementary teacher education institutions).
Period July 1965 to December 1965.

(Bangalore Report).

Gujarat (District level to discuss the problems of training colleges).

J & K (meetings with the Development Commissioner, at

V.L.Ws. and Surpanch of one Block in Srinagar District to get public co-operation for the improvement of elementary Education), Panjab (of coordinators of Extn. Period Centres for elementary education).

Period November 1964 to March 1965.

(Srinagar Report),

Gujarat (of Inspectors, teacher, educators etc.), Maharashtra (of Headmasters and teachers of schools from Wagholi area of Poona, District), Orissa (attending the meeting of the Zilla Parishad).

Period July 1965 to March 1965. (Bangalore Conference Report).

Maharashtra (for teachers of Poona, Municipal Corporation for a week).

Period July 1965 to March 1965. (Bangalore Conference Report).

Gujrat (for seven days for evolving objective centred teaching in elementary training schools).

Period November 1964 to March 1965.

(Srinagar Report).

M.P. (of principal, lecturers and craft instructors).

(4) Courses

(5) Extension Workshops

1

2

3

4

5

Mysore (on English of one week duration for elementary school teachers and one day workshop for selected teachers of single teacher schools).
Period July 1965 to December 1965.
(Bangalore Conference Report).

(6) Other Extension activities.

(i) Academic guidance

Rajasthan (to Primary Extension Centres).
Period 1964 to 1965.
(Sehore Conference Report).

Bihar (to Extension Service Department attached to the training schools at Bikram and Chiri), J & K (to training schools), Rajasthan (to training school), U.P. (to elementary teachers training Institutions and Normal schools)
Period November 1964 to March 1965 (Srinagar Report).

Rajasthan (through correspondence course).
Period July 1965 to December 1965.
(Bangalore Conference Report).

1	2	3	4	5
	(ii) To evolve schemes	<p>Gujarat (Project evolving a scheme for objective-centred teaching the elementary schools was introduced in 5 schools of District of Broach). Period November 1964 to March 1965.</p> <p>(Srinagar Conference Report).</p> <p>Bihar. Period November 1964 to March 1965.</p> <p>(Srinagar Report).</p> <p>A.P. (organised by 100 elementary schools). Period November 1964 to March 1965.</p> <p>(Srinagar Report).</p> <p>Panjab (To nine elementary schools). Period 1964 to 1965.</p> <p>(Sohre Conference Report).</p> <p>Bihar. Period November 1964 to March 1965 (Srinagar Report).</p> <p>Kerala (with the primary schools and teacher training schools as post of school integration programme).</p> <p>Rajasthan (To primary schools through Extension Centre attached to the S.I.E.). Period November 1964 to March 1965. (Srinagar Report).</p>		<p>Maharashtra (Services to Zila Parishad primary schools and teacher training institutions).</p>
	(iii) To establish Extension Services, Department of the S.I.E.			
	(iv) Exhibition-cum-Science Fairs and other Extension activities in Science.			
	(v) To give Extension Services to elementary schools.			
	(vi) Projects have been drawn up for implementation by the inspecting officers.			
	(vii) Extension work/Survey			

1	2	3	4	5
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A.P. (Extension work in Science Training audiovisual education), Madras (of 50 primary schools) Panjab (primary schools).
Programmes being proposed.
Period November 1964 to March 1965.
(Srinagar Report).

Period July 1965 to December 1965.
(Bangalore Conference Report).

(viii) Two conventions of teachers of training schools to discuss details of field work to be taken up by training schools.
Kerala.
Period November 1964 to March 1965.
(Srinagar Conference Report).

(ix) A six weeks' Sahitya Rachnalaya for teachers who have background of creative writings.
M.P.
Period November 1964 to March 1965.
(Srinagar Conference Report).

(x) Essay competition among the primary school teachers of Pusi District.
Orissa.
Period November 1964 to March 1965.
(Srinagar Conference Report).

(xi) Follow-up work with respect to action research projects.
Panjab.
Period November 1964 to March 1965.

(Srinagar Report).

Visits
Panjab (to primary schools and training institution).

- Period November 1964 to March 1965.
(Srinagar Conference Report).
Orissa (to schools), Panjab (T.B.T. and schools),
Period July 1965 to December 1965.
(Bangalore Report).
- (xii) Teachers' day and Basic Education week.
Panjab.
Period November 1964 to March 1965.
(Srinagar Conference Report).
- (xiii) Development of two Nuclear schools.
Panjab.
Period November 1964 to March 1965.
(Srinagar Report).
- (xiv) Talks on methodology of teaching of various subjects for headmasters and assistants of primary schools and training schools.
A.P.
Period July 1965 to December 1965.
(Bangalore Conference Report).
- (xv) Inservice Programme on teaching of Science at class III level.
A.P.
Period July 1965 to December 1965.
(Bangalore Conference Report).
- (xvi) School Improvement Programmes in ten schools.
M.P., Rajasthan.
Period July 1965 to December 1965.
(Bangalore Conference Report).
Panjab (formation of school improvement committee).

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Period July 1965 to December 1965.
(Bangalore Conference Report).

(xvii) Extension of Library facilities.
Orissa.
Period July 1965 to December 1965.
(Bangalore Conference Report).

(xviii) Extension lectures by staff of the S.I.Es.
Orissa.
Period July 1965 to December 1965.
(Bangalore Conference Report).

IV Publications

(1) Brochure or newsletter or News Bulletin on the activities of S.I.E..
By all (except M.P., Mysore, Maharashtra, U.P.*—Newsletter).
(Shore and Srinagar Report).

* U.P. published Brochure in Hindi on Role and Functions of the S.I.E. as well as newsletters too.
Period November 1964 to March 1965.
(Srinagar Report).

By all (except, M.P., Mysore, Maharashtra, U.P.—News-letter).

Panjab (Brochure on better schools through improvement projects).
(Bangalore Report). Duration July 1965 to December 1965.

(2) Quarterly Journal as well as monthly journal.

A.P., Gujarat (Jeewan Shikshan, monthly journal, J & K (monthly), Maharashtra (Jeewan Shikshan), Mysore (Prathmik Shikshak monthly journal Kannada), Orissa (Journal in Oriya, Journal cyclostyled), Rajasthan. Period November 1964 to March 1965.

(Srinagar Conference Report). A.P. (Second issue), Gujarat (Second issue), Maharashtra (next issue), Mysore (next issue).

Period July 1965 to December 1965.

(Bangalore Report).

(3) Report.

Bihar (of trainees courses run by S.I.E.), Gujarat (of District level seminars), M.P. (of the summers—cyclostyled), Mysore (of the first survey of elementary teacher training institutions), Orissa (for annual report and report for orientation seminar), Panjab (of orientation courses for B.E.Os. and teacher educators), U.P. (of the seminar of Heads and their first assistants of elementary training schools and report of the orientation seminar).

Bihar (Proposal for publication of a journal Shiksha Sandesh has been submitted). Period July 1965 to December 1965.

(Bangalore Report).

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Period Nov. 1964 to March 1965
(Srinagar Report).

A.P. (of District Orientation Seminars).
Gujarat (of inservice programme).
Maharashtra (Annual report on primary education and teacher training).
Mysore (of survey and investigation).
U.P. (of orientation seminar of Supervisors in State).
West Bengal (of Seminars).
Period July 1965 to December 1965.
(Bangalore Conference Report).

(4) Hand books/Guide books and J. & K. (for Hand book for elementary teachers).

Kerala (Monograph on Guidance in India, Hand book for training facilities for S.S.L.C. holder in Kerala), Rajasthan (Guide book for elementary teachers).

Period November 1964 to March 1965.
(Srinagar Report).

A.P. (G.B. on teaching of science for classes I and III), Gujarat (a book of additional

reading in Gujarat), Mysore (on Practice Teaching for teacher educators and on Evaluation of sessional work). Period July 1965 to December 1965.

(Bangalore Conference Report).
(Maharashtra (of two Research studies).

Period July 1965 to Dec. 1965.
(Bangalore Conference Report).

(6) Progress Report

Bihar (for work), Orissa (cyclostyled).
Period July 1965 to December 1965.

(Bangalore Report).

(7) Pamphlets and booklet/Monograph.

Panjab (Booklet on Multiple classes Teaching).
Period November 1964 to March 1965.

(Srinagar Report).

Madras (two Booklets on functions of S.I.E. in Hindi and Tamil).

Rajasthan (Five investigation in Hindi relating to Primary Education), U.P. (pamphlets on list of the requirements for Junior Basic School) (2) Teaching of members (3) improving Hindi writing.

Period July 1965 to December 1965.

(8) Others *e.g.*, manuscript for the booklet, contributed articles, questionnaires, translation of books into regional languages.

Gujarat/3 questionnaires for the Survey of elementary training school), J & K (Manuscripts for the booklets on teaching of Science, Social studies and Arithmetic), Kerala (Translation of a booklet entitled school and community into Malayalam), Maharashtra (Manuscripts of 12 booklets for primary school teachers for their individual studies).
Period November 1964 to March 1965.

(Srinagar Report).

(9) Six articles on different aspects of education.

Orissa.

Period July 1965 to December 1965.

(Bangalore Conference Report).

(10) Instruction sheet for teaching of General Science and Mathematics.

West Bengal.

Period July 1965 to December 1965.

(Bangalore Conference Report).

APPENDIX FIVE
THE ESTIMATED COST FOR AN ELEMENTARY
EXTENSION SERVICES CENTRE

Recurring

(a) Staff

The salary of the Coordinator will vary from institution to institution. The principle should be to select a person working on the staff of the institution and to give him an additional 20 per cent of his pay as allowances for doing this work.

	Rs.
(i) Salary of Coordinator @ Rs. 300 per month (including allowances)	3,600.00
(ii) One Clerk-cum-typist @ Rs. 100 per month	1,200.00
Total (a)	4,800.00

(b) Grant-in-aid

50 schools @ Rs. 100 per year per school	5,000.00
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(c) T.A. and Honorarium

T.A. to Coordinator	250.00
T.A. & Honorarium to Resource personnel and advisory committee members	500.00
Total (c)	750.00

(d) Organisation of in-service programmes, seminars, workshops etc. @ Rs. 2 per day for 200 teachers on an average of 10 days in a year	4,000.00
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(e) Exhibition and Audio-visual services	500.00
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(f) Contingencies :

Including stationery and printing, postage, casual labour, repairs to furniture and equipment, hiring of transport, incident, etc.	2,000.00
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Total Recurring	17,050.00
<i>i.e.</i>	17,000.00

Non-recurring

	Rs.
(i) Two cycles	400.00
(ii) Duplicator	2,500.00
(iii) Furniture (Almirahs, tables, chairs etc.)	1,000.00
(iv) Library books	2,000.00
(v) Maps, globes, audio-visual material including projector	3,000.00
Total Non-recurring	8,900.00

Budget for the Central Unit at Department of Basic Education**(i) Staff :**

For organising the training programme and coordinating the extension activities, the following staff was appointed in the Department of Basic Education:—

1. One Adviser (Extension) to be appointed in 1962-63 (scale of pay Rs. 700—1,250).
2. Two Assistant Field Officers to be appointed in 1963-64 (scale of pay Rs. 325—575).
3. One steno-typist and L.D.C. in the usual scale to be appointed in 1962-63.

(ii) Training Programmes :

1962-63 :	Rs.
Training of 30 Coordinators @ (Rs. 500 per person) and one Seminar for Principals @ (Rs. 10,000 for seminar)	25,000.00
1962-63	
Two seminars @ (Rs. 10,000)	20,000.00
1963-64	
Training of 15 coordinators and Principals. Two seminars	30,000.00
1964-65	
Training of 15 coordinators and Principals. Two seminars	30,000.00
1965-66	
Two seminars	20,000.00

APPENDIX SIX

POLICY REGARDING EXTENSION SERVICES CENTRES OF ELEMENTARY TRAINING INSTITUTIONS

(1) Relationship between in Centres and the National Council of Educational Research and Training and the State Governments :

- (a) The Co-ordinator will not be treated as on deputation on foreign service to the Council.
- (b) Appointment of the Co-ordinator will be made by the Management after it has been approved by the Council.
- (c) The Typist-cum-Clerk will be appointed according to Management's rules.

(2) Staff Emoluments :

- (a) Co-ordinator : The Co-ordinator shall have the option to draw pay either in the Council scale or his pay in the scale of pay in his parent office plus 20 per cent of pay as special pay (and not deputation allowance) subject to the condition that the maximum of the scale of pay prescribed for this post by the Council is not exceeded. He will also be entitled to other allowances as may be admissible to the employees of corresponding rank of the institution.

The scale of pay of Rs. 150—10—250—15—400—EB—25—500 was approved for the post.

- (b) Typist-cum-clerk : The typist-cum-clerk will be appointed at the local rates/scales of pay.
- (c) Contribution towards pension, leave salary, Provident fund, medical expenses etc :

The expenditure on these items will not be payable by the Council as staff will not be treated as on deputation on foreign service to the Council.

(3) T.A. and D.A. Honorarium :

- (a) *To Co-ordinator.*—For travelling within the Extension area, the Co-ordinator will draw T.A. and D.A. according to local rates as applicable to others or according to State Government rates as the case may be.
- (b) *The Resource Personnel, Advisory Committee, Members etc.*—The Provision of Rs. 500 made for this item will cover T.A. and D.A. of Hony. Director also. The rates of T.A. and D.A. will be the same as obtaining in the institution.

The Hony. Director will not be entitled to any honorarium for a programme connected with the centre.

(4) Duplicator and Typewriter :

The provision of Rs. 2,500 made for a duplicator will provide for a typewriter (in English or the regional language) also.

(5) Grant-in-aid to Schools :

No cash grants would be paid to the Institution but equipment and material relating to the project which is entrusted to a school for implementation may be purchased and given to the school concerned. The cost of the equipment will vary from project to project but the minimum number of schools to be covered should be 50 as indicated in the budget estimates.

(6) Expenses in connection with the Seminars, Workshops etc. for Teachers:

The total number of teachers to be invited to Seminars should not be reduced. However, if it is possible to accommodate more teachers it should be done. The average daily expenses per teacher on both expenditure would be admissible only for the days of the Seminar or Workshops.

(7) Part-time staff for operation of Audio-visual Aids :

No additional staff for this purpose is necessary. The Co-ordinators who have attended the recent course of training have already been given such training. In future also, seminar training will be arranged for the Co-ordinators.

(8) Financial Year for purposes of Grant-in-aid :

The institutions have agreed that for the purposes of grant the year beginning with August of one year and ending with July of the next year as already adopted, may continue.

Grant-in-aid to the Centres may, however, be released in suitable instalments as may be decided by the Council.

(9) Progress Reports :

Director, Department of Basic Education has already worked out and sent the Centres a proforma in which the Centres have to submit their reports.

(10) Accounts :

A note containing detailed instructions as to the form in which accounts are maintained by the Extension Centres was circulated to the Co-ordinators and Hony. Directors during the training course and the instructions laid down therein, should be strictly observed.

The Audit fee may be met out of provision made for contingencies.

Even the Government institutions may submit their accounts to Registered Chartered Accountants for scrutiny if their own auditors are not in a position to audit the accounts in time.

APPENDIX SEVEN
TEACHER EDUCATORS—QUALIFICATIONS, EXPERIENCE—SALARY SCALES—OF
POST GRADUATE TRAINING COLLEGES

Sl. No.	Name of State	Category of Teachers	Minimum qualifications for Appointment*	Secondary Schools	Experience required Teacher Training	Inspection	Pay Scales
1	2	3	4	5	6	7	8
1.	Andhra Pradesh	(A) Heads of Institutions	M.A. II Class B.Ed.	5 years as Principal or Lecturer in the case of direct recruitment and 3 years service in the ordinary gazetted post for promotion.	...	...	Rs. 700—1000.
		(B) Professors	M.A. II Class, Ph.D., M.Ed. (Psychology)	The posts are filled by M.A. Ph.D. duly relaxing the qualifications	...	...	Rs. 600—900
		(C) Lecturers	M.A. II Class B.Ed.	Five years in subordinate service including 2 years as Assistant Lecturer for promotion. The directly recruited M.A. 1st class or 2nd class are sent for training by Government.	...	One year as Dy. Inspector of Schools	Rs. 300—600 UGC Scale.

* The Universities have been insisting on a II class M.Ed. degree

1	2	3	4	5	6	7	8
2	Assam	(A) Heads of Institutions (B) Professors (C) Lecturers	M.A. B.T./B.Ed. -Do- -Do-	Depends on availability of candidates.	-Do- -Do-		Rs. 750—1,200 Rs. 550—1,100 Rs. 350—925
3	Bihar	(A) Heads of Institutions (B) Professors (C) Lecturers	M.A. M.A.	They must have been in Class I of the Bihar Educational Service. In their posting their past experience of work in Training Colleges receives due consideration. They must have been in class I of the Bihar Educational Service or of equivalent rank and sufficiently acquainted with teacher training programme.			Rs. 450—1,250 plus Rs. 100 special pay. Rs. 700—1,100 (only in University Service).
4	Gujarat	(A) Heads of Institutions (B) Professors (C) Lecturers	M.A. -Do- M.Ed. II Class or B.Ed. 1st Class	They must be in Class II of the Bihar Educational Service or of equivalent rank in University Service if any 5 years	5 years' teaching experience ... ...	... ... ...	Rs. 325—925 Rs. 400—800 if in University Service. Rs. 500—900 Rs. 300—600 Rs. 200—500

1	2	3	4	5	6	7	8
5.	Jammu and Kashmir						
6.	Kerala	(A) Heads of Institutions	M.A., LT/B.T./B. Ed. (II class for one of the two).	...	Nil	...	Government Colleges Rs. 500—800 plus Rs. 100 as special pay. Private Colleges Rs. 400—700
		(B) Professors	Do.	...	Nil	...	Government Colleges Rs. 475—700 Private Colleges Rs. 300—600
		(C) Lecturers	Do.	...	Nil	...	Government Colleges Rs. 250—500 Private Colleges Rs. 200—400
7.	Madhya Pradesh	(A) Heads of Institutions	M.A., M.Ed.	...	Departmental Seniority	...	Rs. 1,100—30—1160 —40—1200
		(B) Professors	Do.	...	Do.	...	Rs. 550—700 EB— 950
		(C) Lecturers	Do.	...	Do.	...	Rs. 275—700

1	2	3	4	5	6	7	8
8.	Madras						
9.	Maharashtra	(A) Heads of Institutions	...	Not available			
		(B) Professors*	B.A., B.Ed. or M.A., B.Ed. or B.A., M.Ed.	5 to 7 years experience of teaching or as Head of an Institution.	...		Not available.
		(C) Lecturers*	-Do-	3 to 5 years experience of teaching and or supervision.	...		Not available.
10.	Mysore	(A) Heads of Institutions	M.A., B.T., B.Ed.	...	10 years	...	Rs. 350—800 plus special pay Rs. 100
		(B) Professors	M.A., B.T., B.Ed.	...	10 years	...	Rs. 350—800
		(C) Lecturers	M.A., B.T., B.Ed. or T.C.L., B.A. B.T.	10 years	...	...	Rs. 250—500
11.	Nagaland			No Graduate training institution.			

*In general the qualifications and experience are as given here but they differ from University to University.

1	2	3	4	5	6	7	8
12. Orissa	(A) Heads of Institutions		M.A., B.T., B.Ed. or M.Ed.	Over 5 years	Over 5 years	...	Rs. 600—1000
	(B) Professors		...	...	...	...	...
	(C) Lecturers		M.A., B.Ed. or M.Ed.	One to five years	...	...	Rs. 260—780
13. Punjab	(A) Heads of Institutions/Principals		M.A.	...	5 years	...	Rs. 350—1200
	(B) Senior Lecturer		M.A., M.Ed.	...	-Do-	...	Rs. 250—750
	(C) Lecturer		M.A., B.T. (B.Ed.)	...	...	...	Rs. 200—500
14. Rajasthan	(A) Heads of Institutions		M.A. II class with B.T. II class or B.Ed./LT or II class M.Ed.	Total 10 years with 5 years of Teaching in Training College.	...	...	Rs. 550—950
	(B) Professors		M.A. II class with B.T. II class or B.Ed. or L.T.	...	5 years	...	Rs. 285—800
	(C) Lecturers		M.A. II class with B.T. or B.Ed. II class or M.Ed. II class	3 years	Rs. 285—800

1	2	3	4	5	6	7	8
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15. Uttar Pradesh	(A) Heads of Institutions	Master's Degree with Teachers training	Not available	UPES (Senior) and (Junior) scales, <i>i.e.</i> (i) Rs. 500—1200 and (ii) Rs. 250—850
	(B) Professors	Post-graduate Degree with Teachers Training	Not Available	Rs. 250—850 (Junior U.P.E.S. scale).
	(C) Lecturers	M.A., L.T.	Not available	Special S.E.S. scale Rs 200—450
16. West Bengal				

UNION TERRITORIES

1	2	3	4	5	6	7	8
1.	Andaman and Nicobar Islands	No graduate training institution	...	...	...	...	...
2.	Delhi*	Heads of Institutions	M.A./B.T./B.Ed. (Knowledge of Hindi).	Experience and research in Education and 5 years teaching and administrative experience.			Rs. 1000—1500
		Readers	-Do- (Knowledge of Hindi)	Research in Education and 3-year experience in Training college.			Rs 700—1100
		Lecturers	-Do- -Do-				Rs. 400—800
3.	Goa, Daman and Diu		As per Bombay University Rule (Details not given)				
4.	Himachal Pradesh						
5.	Manipur†	Lecturers	M.A. (Edu.)/ M.Ed.	...	...	...	Rs 225—500
6.	NEFA						

1	2	3	4	5	6	7	8
7.	Pondicherry		No. Graduate Training Institution				
8.	Tripura	Heads of Institutions	M.A./B.T./B.Ed.	...	1 to 5 years	...	(i) Rs. 350—1,200 old scales for B.T. college, (ii) Rs. 325—1,000 plus Rs. 100 per mensem for Basic Training College.
		Senior Lecturer	-Do-	...	Do.	...	Rs. 325—1000
		Lecturer	-Do-	Teaching experience			Rs. 275—650

*The scales given here relate to the Central Institute of Education, Delhi.

†As the class was attached to the Government degree college no Heads of Institutions were appointed separately.

APPENDIX EIGHT

SCHEME OF EXAMINATION IN THE REGIONAL COLLEGE OF EDUCATION BHUBANESHWAR

B.Sc.. B.Ed. (Science) Course

Part I Examination

(At the end of the First Year)

<i>Subjects</i>	<i>Maximum Marks</i>		
	<i>Univer- sity Exam.</i>	<i>College Exam.</i>	<i>Total</i>
1	2	3	4
1. English I	80	20	100
2. Unified Physical Sciences :			
-do- I Theory	80	20	100
I Practical	25	25	50
3. Unified Biological Sciences :			
-do- I Theory	80	20	100
I Practical	25	25	50
4. (a) Mathematics (Ancillary) I for Biological Sciences Group	80	20	100
<i>Or</i>			
(b) Mathematics (Minor) I for Physical Sciences Group	...	...	...
Total			500

Part II Examination

(At the end of the Second Year)

1	2	3	4
1. English II	80	20	100
2. Regional Language (Oriya or Bengali or Hindi or Assamese)	80	20	100
3. Social Sciences	80	20	100
4. General Psychology	80	20	100

1	2	3	4
5. Unified Physical Sciences :			
II Theory	80	20	100
II Practical	25	25	50
6. Unified Biological Sciences :			
II Theory	80	20	100
II Practical	25	25	50
7. Workshop Practice Practical	50	50	100
8. (a) For Biological Sciences Group Physio- logy and Hygiene	40	10	50
Mathematics (Ancillary) II	40	10	50
Or			
(b) For Physical Sciences Group Mathe- matics (Minor) II	80	20	100
Total			900

Part III Examination
(At the end of the Third Year)

1	2	3	4
1. English III	80	20	100
2. History of Sciences and Technology	80	20	100
3. Educational Psychology	80	20	100
4. Workshop in Teaching	80	20	100
5. Philosophical and Sociological Founda- tions of Education	80	20	100
6. and 7. Any <i>Two</i> of the following subjects :			
(a) Chemistry (Major)			
I Theory	80	20	100
I Practical	50	50	100
(b) Physics (Major)			
I Theory	80	20	100
I Practical	50	50	100
(c) Botany (Major)			
I Theory	80	20	100
I Practical	50	50	100
(d) Zoology (Major)			
I Theory	80	20	100
I Practical	50	50	100
(e) Mathematics (Major)			
I ...	80	20	100
-do- II ...	80	20	100
Total			900

Final Examination

(At the end of the Fourth Year)

	1	2	3	4
1. Health, Physical Education and Recreation ; Theory and Practical		50	50	100
2. Problems of Indian Education		80	20	100
3. Methods of Teaching Science		80	20	100
4. Practical Examination in Teaching		150	150	300
5 and 6. Any <i>Two</i> of the following subjects :				
(a) Chemistry (Major)	II Theory	80	20	100
	III Theory	80	20	100
	Practical	50	50	100
(b) Physics (Major)	II Theory	80	20	100
	III Theory	80	20	100
	Practical	50	50	100
(c) Botany (Major)	II Theory	80	20	100
	III Theory	80	20	100
	Practical	50	50	100
(d) Zoology (Major)	II Theory	80	20	100
	III Theory	80	20	100
	Practical	50	50	100
(e) Mathematics (Major)	III	80	20	100
-do- -do-	IV	80	20	100
-do- -do-	V	80	20	100
Total				1,200

PROMOTIONS, EXAMINATIONS, MARKS AND DIVISIONS

Promotions

1. A student will be eligible to appear at the examination of any paper if he has attended at least 75 per cent of the periods allotted to that paper. In exceptional cases where the required attendance is less than 75 per cent, condonation may be granted by the University up to the extent of 10 per cent only.
2. A student is eligible for promotion from the first to the second year and from the second to the third year provided he does not fail in more than two papers and/or practical examinations.
3. To qualify for promotion all papers in which a student has failed in one year must be passed by the student either in the supplementary or in the annual examination during the following year.

4. Two consecutive failures in the theory and/or practical of any subject will disqualify a student for promotion to the next year.
5. A student will be eligible for promotion to the fourth year on completely satisfying the requirements of theory and practical papers of the first three years.
6. Accumulation of failures in four subjects at any one time will disqualify a student for further education in the College. Exceptional cases may be reviewed by the Principal and the faculty.

Supplementary Examinations

1. On failure in the final examination, a student will be eligible to sit for the supplementary examination provided he does not fail in more than two papers and/or practicals.
2. Two consecutive failures in the theory and/or practical examinations of any subject will disqualify a student from appearing at any subsequent examination of his degree unless he produces a certificate of adequate preparation and attendance in the college from the Principal.

Marks and Divisions

1. A minimum of 40 per cent of marks will be required for pass in all theory papers.
2. A minimum of 50 per cent of marks will be required for pass in all practical examinations including practical teaching.
3. A minimum of 45 per cent of marks will be required in the aggregate of marks of all theory and practical papers.
4. Division in the final result declared will be determined on the marks obtained in all four years as follows :

II Division—45 per cent to 59 per cent.
I Division—60 per cent or above.

Honours—A candidate who passes in all subjects at the first attempt and secures 75 per cent of marks in any subject shall be declared to have passed with Honours in that subject.

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APPENDIX NINE
LESSON PLANS IN PRACTICAL STREAMS
(Regional College of Education, Ajmer)
Topic : Double Column Cash-book

Class IX.

(A) Subject : Book-keeping

Aims : (i) To understand the necessity of the Double Column Cash-book.

(ii) To develop skill in preparing Double Column Cash-book.

Previous knowledge : Students have already learned about single Column Cash-book.

Procedure : Teacher will present some Transactions before the students to explain the need of the Cash-book. He will use the

question answer technique in introducing the lesson. After introducing he will clarify the rulings and then with the help of an exercise a Double Column Cash-book will be prepared. In the preparation teacher will use the "How" and "Why" approach of teaching book-keeping.

Teaching Aids :

(i) Some transactions on the roll-up Board.

(ii) An exercise on the double column Cash-book on roll-up Board.

Specific Objectives
(1)

Teacher's Activity
(2)

Student's Activity
(3)

To make them realise the necessity of Double Column Cash-book.

Yesterday we prepared a Single Column Cash-book. Here are some of the transactions (open the roll-up) which we will post in the Cash-book.

What is the ruling of the Single Column Cash-book ?

Receipt *Payment*

<i>D P L.F</i>	<i>Amount</i>	<i>D P L.F</i>	<i>Amount</i>
Cash Sales			Rs. 15
To Sales			Rs. 15

What is the first Transaction ?

How we will write this transaction on the Cash-book ?

What is the second Transaction ?

Cash Paid to Mohanlal & Co. Rs. 200
By Mohanlal & Co. Rs. 200

Enter this transaction in the Cash-book ?

What is the third Transaction ?

Cash received from Motiram &
Sons Rs. 380, Discount Allowed Rs. 20

Enter this transaction in the Cash-book ?

To Motiram & Sons Rs. 380
Entry for Discount cannot be made.
In Discount Account.

Where you will enter this Discount ?

Enter this entry in the Discount Account

Discount Account

To Motiram & Sons 20.00

Here for one entry we have to open two books, and therefore, it takes more time. Can you think of any other way in the Cash-book itself and save the time ?

To acquaint the students with the ruling of Double Column Cash-book.

If we add Discount Column in this Cash-book, then it becomes Double Column Cash-book.

To acquaint the students with the principles of preparing Double Column Cash-book.

Teacher will open the second roll-up Board and will ask the following questions :—

What is the balance on August 1, 1965 ?

Rs. 1,775

How will you write in the Cash-book ?

Rs. 1,775

What is the transaction of 5th August ?

Paid Ratan Bros. Rs. 395 and
Discount received Rs. 5

How will you write it in the Cash-book ?

Not known

The amount paid to Ratan Bros. will be written in cash column of the payment side, as cash is paid. Discount will be written in the Discount column of the payment side, as it is a gain to us. Now enter this entry in the Cash-book.

By Ratan Bros. Rs. 395

How will you write the entry of 16th August... To sales Rs. 500

To clarify the concept of Trade Discount and Cash Discount.

What is the entry on 25th August, 1965 ?

Enter this entry in the Cash-book.

Purchased goods for Rs. 800 subject to a trade discount of 10 per cent.

By purchases Rs. 720 Rs. 80

(in Cash Col.) (In Discount Col.)

10 per cent of Rs. 800.

This entry is wrong because this is a Trade-Discount which is given by the seller to us. Only Cash Discount is to be written in the Cash-book.

Students will listen the Teacher.

Trade discount is given to every businessman which is to be subtracted from the amount of purchases, while Cash Discount is given only for prompt cash payment, and hence it is shown in the Cash-book.

Now what will be entry in the Cash-book ?

By Purchases Rs. 720

In the same way the other transactions of the exercise will be solved with the help of the students.

To acquaint the students with the balance of the Cash-book.

How you will balance the Single Column Cash-book ?

Balance the Cash Column of this Cash-book in the same way as you balance single Column Cash-book.

What is the Balance of the Cash Column ?

Rs. 2,500.

What is the total of the Discount Column on the receipt side ?

Rs. 30

What is the total of Discount Column on the payment side ?

Rs. 5

Write the totals of Discount Column as they are on both the sides.

"Why,"

This is a Cash-book and the entries regarding Discount can be even with the credit transaction and therefore we transfer the total of both sides of these columns in the Discount A/c as it is.

To evaluate the Lesson's Teaching :

What is the difference between Cash Discount and Trade Discount ?

Trade discount is given by the businessmen on the purchases or sales, while cash Discount is given only on prompt payment. Entries regarding Cash Discount is to be made in Double Column Cash-book, while Trade Discount is subtracted from the purchases or sales.

Why this book is known as Two Column Cash-book ?

Because this Book has two Columns, i.e., Cash Column and Discount Column.

Home Assignment :

Do question No.....of your which is on page No.....

First Receipt side is added and then the payment side is added. As the payment side is less than the receipt side, the balance is written as
By Balance c/d.....

Roll-up Board No. 1

Enter the following transactions in the Single Column Cash-book :—

1. Cash Sales
Rs. 150
2. Cash paid to Mohanlal & Sons.
Rs. 100
3. Cash received from Motiram &
Sons and discount allowed to him
Rs. 20.
Rs. 280

Roll-up Board No. 2

From the following transactions write up a Two Column Cash-book :—

1965

August,

1. Cash in hand Rs. 1,775.
5. Paid Ratan Bros. Rs. 395, Discount received Rs. 5.
11. Received from Hari & Co. Rs. 690 ; Discount allowed Rs. 10.
16. Cash Sales Rs. 500.
25. Purchased goods for Rs. 800 subject to a Trade Discount of Rs. 10 per cent.
26. Goods sold to Hari Ram and Sons on Credit Rs. 300.
28. Received Cash from Sharma Trading Co. Rs. 680 ; Discount allowed Rs. 20.
31. Paid rent Rs. 30.

BLACK BOARD SUMMARY

Double Column Cash book

Receipt

Date	Particulars	VN	LF	Cash	Disc.	Date	Particulars	VN	LF	Cash	Disc.	Payment
1965												
Aug. 1	To Balance b/d			Rs. 1,775	Rs. ...	1965 Aug. 5	By Ratan Bros.			Rs. 395	Rs. 5	
11	To Hari & Co.			690	10	" 26	By Purchases			720	...	
16	To Sales			500	...	" 31	By Rent			30	...	
28	To Sharma Trd. Corp.			680	20	"	Balance c/d			2,500		
Total				3,645	30	Total						
1965 Sept. 1	To Balance b/d			2,500								

(b) Subject	Type-writing
Topic	Review and Skill Booster.
Aim	To help students to boost their speed and accuracy.
Previous knowledge	Students have learnt the reach of fingers over different keys except the number and symbol keys. (First row from the top of the key-board).
Procedure	All students will type first with the dictation given by the teacher and then independently. (The teacher will give instructions wherever necessary to the students who will follow them). During the period of independent typing the teacher will supervise the whole class and help students individually and collectively.
Teaching Aids	<ol style="list-style-type: none"> 1. Demonstration Stand. 2. Interval Timer. 3. Cyclostyled exercise fixed on the copyholders.

Specific Objectives

Review of Home Row keys and Alphabets

Teacher's Activity

Asking the students to be ready for typing.
The teacher will see that all students are ready for typing.

Getting themselves ready for typing.

Dictation of line number 1 of the exercise
(Return the carriage skip a line).

Typing along with the dictation (Returning the carriage, skipping a line.)

Asking the students to bring their 'Hands Down'.

Following the instructions.

Instruction : to type line number 1 of the exercise independently for two minutes and stop when the signal goes.

Listening to the instructions.

Asking the students to be ready for typing.
The teacher will see that all students are ready for typing.

Getting themselves ready for typing.

To give signal for starting the work 'Start' Typing by the whole class independently.
(Supervising the whole class and helping the students wherever necessary during the course of typing by the class).

As soon as two minutes are over, giving a signal of 'Stop' and asking the students to bring their 'Hands Down'.
Following the instructions.

The same process will continue for typing upto line number 7 given in the Exercise. In the column number 1, Specific Objectives for each line given in the exercise will no doubt change as follows :

Line number

Specific Objectives

- | | |
|---|--|
| 3 | Typing the Keys of Index Fingers <i>i.e.</i> , Firsts. |
| 4 | Typing the keys of One-hand at a time <i>i.e.</i> , One-handers. |
| 5 | Typing the Keys of Alternate Hand <i>i.e.</i> , Alternators. |
| 6 | Typing Phrases. |
| 7 | Typing for Speed. |

End-of-period Procedures :

Asking the students to bring their respective papers out of the machine.
Bring the Carriage at the centre of the machine and cover it.
Collecting of papers (or filing their papers in the file) and handing over the papers to the teacher.
(Help of one or more students can be sought).

The teacher will check all the papers.

A. BASIC KEY DRILLS

(Each line once with teacher, two minutes by yourself).

1. asd fgh jkl ; as dfg hjk l ; a sdf ghj kl ; asd fgh kl
2. abc def ghi jkl mno pqr stu vwx yza bcd efg hij kl
3. ju buy try gun fry fur tug tub hut rut but gut bug
4. up in jo as at you pin oil cat sad few axe mop fez
5. it he to of am end man hen sot lay for cow rid pay
6. on it, or he, at it, of me, if we, of use, as they
7. It is up to him to do or not to do what he wishes.

B. ACCURACY-SPEED-ACCURACY PRACTICE

(Each line ; once with teacher; two 1' speed timings and one 1' accuracy timings, then 2' timings over all)

8. The figure curve is more important than its size.
9. Hit the keys as though each one of them were hot.
10. A key jam is one sure way to lose time and speed.
11. Keys will not jam if hit hard and let go quickly.
12. The quick typist is the one who never loses time.

Topic.

Chiselling. How to use a Firmer Chisel.

Aims :

- (i) To create interest in Industrial Arts.
- (ii) To introduce students the composition of wood and major defects.
- (iii) To examine the wood and work accordingly.

Previous knowledge : The students are acquainted with the grains.

They know reaping, cross cutting and planing.
They know about common wood-working tools.

Teaching Aids :

Charts.
Pieces of Wood.
Different types of Chisels and Files.
Thread and Nails.

Specific activities 1

Teacher's Activity 2

Students' activity 3

Review of common wood-working tools

The teacher will arrange the class properly so that they may watch his activity conveniently.

The students will stand accordingly.

Now the teacher will ask questions :

Name the tools you have used so far in wood-work class ?

The students will answer. Rip saw, cross cut saw, tenon saw, jack plane, marking gauge, Trysquare, scale etc.

What is the use of a Rip saw ?

It cuts along the grains.

What are the grains ?

The lines which are seen on wood are called grains.

1	2	3
Show an ellipse while asking the question	How to cut a piece of wood along the grains in the circular shape or so ?	Ask a student to try with a chisel. (Problem).
Related information	The teacher will ask the main parts of the tree.	The students will answer : roots, trunk, branches, leaves and so on.
Show Chart :	How does the tree grow ?	(Problem)
	The teacher will explain about the position of wood.	The students will learn various parts of the tree.
Use B.B.	How the grains are bound together ?	Problem.
	Explain giving some examples, and at this stage explain how to work with a chisel, step by step.	The students will observe the activities of the teacher.
Show Chart	Step 1 :—Cut waste material with a cross cut or Tenon saw.	
Ask questions and show results at each step.	Step 2 :—Start working from the centre towards the ends.	
	Step 3 : Use a wood rasp.	
	Step 4 : Use a file.	
	Step 5 : Use an abrasive paper.	
	Ask questions after the demonstration is over :—	
	What is the first step ?	

Application

Why the mallet should be used to strike at the head of the chisel instead of a hammer?

The questions are to be asked to the students and their answer is to be made, clear if they could not follow the procedure properly.

How a file should be used?

Now the teacher will ask some students to assist him in distributing the tools and material.

The students will go to their work benches and start working.

The teacher will supervise the students and help them if they require.

The teacher will demonstrate the slower ones again individually or in small groups if he feels it necessary.

The students will observe the demonstration to follow it further properly.

The teacher will examine the pieces and discuss their results with the individuals with proper appreciation.

The students will note the result.

The faster ones will be asked to help the slower ones.

The senior students will help their mates.

Summary :

Ask questions and explain the demonstration in short.

Assignment :

How a tree grows? Different types of Chisel and their uses.

Ref. Books :

'Kashtha Kala' Padyati P. No. 13 and 14.
Kashtha Kala by D.D. Pandey.
Parichaya by M.K. Rab. P. No. 113 and 116.

APPENDIX TEN

INDIAN ASSOCIATION OF TEACHER EDUCATORS

(Presidents and Secretaries)

<i>Year</i>	<i>Venue of the Conference</i>	<i>Presidents</i>	<i>Secretaries</i>
1950 November	Baroda	Smt. Hansaben Mehta	Smt. M. R. Shah. Prof. T. K. N. Menon. Dr. S. N. Mukerji.
1951 November	Mysore	Do.	Prof. T. K. N. Menon. Prof. A. C. Deve Gowda
1954 November	Hyderabad	Do.	Prof. T. K. N. Menon.
1957 May	Bangalore	Do.	Prof. T. K. N. Menon.
1958 December	Chandigarh	Miss S. Panandikar	Dr. E. A. Pires.
1961 June	Bangalore	Prof. T.K.N. Menon	Prof. V. G. Jhingran.
1964 June	Mysore	Prof. A.C. Deve Gowda	Do.
1966 June	Taradevi (Simla)	Do.	Do. Miss K. Pasricha.
1966 October	Trivandrum	Dr. S.N. Mukerji	Dr. G. Chaurasia. Dr. N. P. Pillai.
1967 October	Bhubaneswar	Do.	Dr. R. H. Dave. Dr. R. C. Das.

INDEX

[Note. The name of a city covers the institutions also
which it happens to have.]

"A"

- Abbot-Wood Report, 30, 31, 248, 275,
416
Adam, William, 7
Afro-Asian Nations, 32
Agra, 8, 156, 159, 164, 169, 171, 174,
356, 358, 407, 427, 445
Ahmedabad, 17, 104, 295, 308, 328,
427
Ahmednagar, 5
Ajmer, 328
Ajmer (RCE), 39, 131, 189, 223, 235,
258
Akbar, 431
Aligarh, 151, 153, 157, 162, 170-1,
174, 316, 408, 427
Allahabad, 147, 153, 156-172, 174-5,
295, 362, 427
Allahabad, C.P.I., 16, 30, 32, 34, 135
Allepy, 295
All-India Conference of Training
Colleges, 36, 40, 245
All-India Council for Secondary Edu-
cation, 37, 278, 280
All-India Council for Technical Educa-
tion (and Principals), 251, 253, 453
All-India Survey of Ele Tr. Ed., 92
99
American Experts, 396
American Universities, 470
Anand, 435
Andhra Pradesh, 30, 96, 98, 105, 131,
138, 145, 153, 163, 165, 189, 205,
235, 316, 328, 357, 408
Andrew, Bell, 4, 5
Anglo-Indian, 146
Annamalai, 137, 408
Annamalia, 131
Area Training Organisations, 65-6, 68
Assam, 13, 16, 20, 23, 25, 47, 61, 89
138, 145, 205, 235, 331, 357
Associate-ship Course, 432
Avinashlingam, T., 202

B

- Balsevika Training, 290, 292-6, 302
Bangalore, 93, 95-7, 100, 106, 137, 295,
318, 435, 445
Baroda, 35, 40, 137, 143, 153, 156-172,
174, 189, 220, 231, 260, 277, 291,
295, 407, 415, 435, 441, 443, 445

- Baroda Study Group, 450, 457
Baroda Report, 420, 461
Bell-Lancaster System, 5, 6
Benaras, 151, 153, 156-8, 161, 175, 330,
408
Berar, 16
Berhampore, 8
Bhagalpur, 137
Bhave, Vinoba, 202
Bhavnagar, 295
Bhopal, 39, 131, 189, 223, 235, 253
Bhubaneswar, 39, 131, 189, 223, 231,
235
Bihar, 7, 30, 33, 46-7, 135, 137-8, 148,
205, 235, 315-6, 362, 403
Bombay, 5-7, 9, 11, 16-7, 19, 20, 22, 30,
33, 151, 153, 156-172, 174-5, 221,
231, 260-2, 266, 274, 276, 316, 330,
401, 403, 407, 422, 441, 448
Bombay State Head Masters' Associa-
tion, 276
Boutros, 7
Brahman, 3
Brahmana, 4
Brahma Samaj, 22
British, 65, 276, 329, 363, 369, 370
British Council, 326, 363
Buck H.C., 307
Buddhist 'Varsities, 307

C

- CABE, 33, 37, 100, 198, 220, 235
Calcutta, 408, 427, 435
Calcutta Commission Report (Sadler
Commission), 25-7, 30, 151, 402,
444
Calcutta ('Varsity), 5-8, 14, 22-3, 25,
136, 156, 158, 169, 189, 253, 274
Carey, 4
Central Board of Sec. Edu., 431
Central Bureau of Edl. and Vocational
Guidance, 312-3, 318, 323-4
Central Hindi Directorate, 356
Central Institute of Edu., 33, 35, 39,
89, 132, 184, 189, 191-3, 397
Central Provinces, 11, 15-6, 18, 21-2
Central Schools Organization, 431
Central Science Workshop, 437
Central Welfare Board, 290-292
Centre of Cosmic Education, 297

Centre for Advanced Study, 468
 Chandigarh, 253, 295-6, 307, 362, 435
 Chetan Balmadi, 295-7
 Cheyur, 8
 Chidambaran, 27
 Chitranjan Institute, 295
 C.I.E. (English), 37, 281, 326-347, 362
 Cinderella, 443
 Coimbatore, 427
 Committee on Planned Projects, 457
 Conant, J.B., 230
 Coorg, 11
 COPP, 52, 66, 109, 135, 448
 Cuttack, 14
 Czechoslovakia, 213

D

Dacca, 8
 Dakshina Bharat Hindi Prachar Sabha, 356
 Dalton Plan, 27
 Danish, 4
 David Hare, Trg. College, 22, 27, 274
 Deccan, 401
 Delhi, 427
 Delhi Corporation, 110, 113
 Delhi, New, 30, 437
 Delhi (Union Territory), 46, 89, 132, 196, 235, 294, 296-7, 313, 315-6
 Delhi Varsity, 137, 153, 156, 158-9, 160-5, 169, 170-2, 174-5, 190, 316, 402, 408
 Delhi Workshop, 89, 90, 92-7, 99
 DEPSE, 109, 117, 228, 395, 446
 Deve-Gowda, A.C., 97, 449
 Dewey, John, 201, 217
 Dharwar, 8, 17
 Dravidian, 371
 Duff, Alexander, 7
 Dustoor, P.E., 326

E

East India Company, 4, 7
 Education Commission, 40, 100, 102, 152, 180, 183, 190, 243-4, 249, 281, 293, 451-3, 458-460, 463-6
 Elphinstone, 5, 401
 Elphinstone Institution, 7, 401
 Elphinstone Professors, 7, 401
 England, 408
 Eurasians, 11
 European Missionaries, 4
 Ford Foundation, 36, 326

F

Ford Foundation, 36, 326
 French, 213
 Froebel, 296

G

Gakhar, 29
 Gandhiji, 166, 196-7, 199, 201, 217, 354, 431
 Garp, 90
 Gauhati, 8, 296
 Geneva, 213
 Goa, 235
 Gopalaswamy, 223
 Gorakhpur, 137, 156, 161, 169, 170-1, 220, 408
 Govt. of India (Ministry of Education), 49, 50, 93-4, 101, 117, 135, 143, 152, 189, 199, 201-2, 207, 235, 243, 250-1, 253, 274-5, 280, 312, 323, 357-9, 378, 381, 389, 407, 416-7, 420, 428, 447, 451-3, 459
 Grant, Alexander, 402
 Greeks, 307
 Griffith, W.E., 27
 Group Centres, 104
 Gujarat, 61, 96, 119, 135, 146, 162, 164, 166-7, 170-2, 205, 235, 259, 266, 291, 294, 297, 331, 357, 401, 407, 427
 Guru Nanak, 431
 Gwalior, 308

H

Harijan, 176.
 Haripura, 197
 Hartog Committee, 28, 248, 274, 410
 Haryana, 235
 Herbart, 217
 Himachal Pradesh, 235, 362
 Hindus, 4, 6
 Hindustan Talimi Sangh, 197
 Hoogly, 8
 Howard, 8, 9
 Hunter Commission (Indian Education Commission), 7, 9, 10-2, 248, 273
 Hussain, Zakir, 196-7, 221
 Hyderabad, 36, 205, 328, 331, 362, 427, 435
 Hyderabad (Sindh), 17

I

IATE (NATE), 100, 126, 152, 180, 278, 410, 412, 441-8, 449-454, 467, 475-6
 India, 13-4, 163, 224-5, 250, 270, 273, 315-6, 329-30, 350, 356, 363, 369, 407-8, 427, 434-6, 441, 452
 Indian, 350, 363, 419, 421, 425, 428, 438-9, 463, 469
 Indian Christians, 11
 Indian Council for Child Welfare, 291-2
 Indian Education Commission (Kothari Commission), 374, 378, 402, 409, 410, 412, 417-9, 420

Indian Educational Policy Resolution, (1904-1913), 18, 23, 24,
 Indian Languages, 348, 350, 352, 371
 Indian National Congress, 197
 Indian Parliamentary and Scientific Committee, 374
 Indian Science Congress, 443
 Indian Universities, 457
 Institute of Education, 67
 International Montessori Ass., 293
 Inter-University Board, 220

J

Jubbulpur, 16, 30, 137, 157, 159, 170-1, 260, 275, 295, 316, 445
 Jadav Pur, 136
 Jaipur, 435
 Jamia-Millia, 137, 196
 Jammu and Kashmir, 135-8, 146, 170, 235, 268, 331, 357, 445
 Japan, 26
 Jatkas, 3
 Jivaji Rao, 137
 Jodhpur, 178, 183, 189
 Jullundur, 29

K

Kabir, 431
 Kafasion, 104
 Kalidas, 307
 Kalyan 'Varsity, 308
 Kanpur, 435, 437
 Kant, 476
 Kapur, Dr. J.N., 437
 Karachi, 8
 Karnatak, 137, 153, 266, 316, 407
 Kendriya Hindi Sansthan, 356
 Kerala, 46-7, 55, 89, 146, 158, 164, 167-172, 205, 208, 235, 294, 296, 316, 356-8, 362, 407
 Khairagarh, 136-7
 Kher Committee, 198
 Kilpatrick, 201
 Kirkpatrick, P., 380
 Kolhapur, 35, 328
 Konkan, 401
 Kothari, D.S., 190, 435
 Kozikode, 295
 Kurseong, 14, 16
 Kurukshetra, 39, 131, 137, 226, 233-5, 242-3, 246

L

Lady Irwin College, 30
 Lahore, 10-1, 13, 16, 25,
 Language Pandits, 362
 Lucknow, 14, 33, 153, 156, 158-9, 161, 164, 167, 170-2, 174, 308, 316, 408

Lyallpur Agriculture College, 25

M

Maclaren, 307
 Madhya Pradesh, 47, 93, 135, 138, 146, 205, 235, 259, 260, 262, 264, 266, 294, 315, 331, 362
 Madras, 5-6, 8-10, 12-4, 17-9, 21, 23, 25, 32, 89, 131, 153, 156-161, 164-5, 167-172, 174-5, 189, 205-6, 208-9, 235, 253, 273, 275-6, 290-1, 294, 296, 303-4, 350, 356-7, 362, 365, 401, 407, 427, 435
 Madras Scheme, 293
 Madrassehs, 4
 Madras Teachers' Guild, 276
 Mahabaleshwar, 276
 Maharashtra, 131, 135, 146, 205, 235, 259-260, 262, 291, 293-4, 300-1, 308-9, 315, 331
 Maheshwari, P., 437
 Malayalam, 360, 362
 Mangalore, 8
 Manipur, 235
 Marathwada, 137
 Marshman, 4
 Masica, C.P., 329
 Mayavaram, 8
 Mayhew, Arthur, 421
 McKee, W.J., 27
 Meerut, 8
 Mehta, Hansaben, 441, 443-5
 Menon, T.K.N., 443
 Ministry of Labour, 257
 Moga, 30
 Montessori, Madam, 290, 293, 296
 Morrill Act, 279
 Mozali, Pulupsey, 5
 Mukerji Report, 457, 472
 Mukha Sevikas, 293, 304
 Mundako Panishad, 3
 Mysore, 27, 39, 61, 96, 131, 153, 161, 189, 205-9, 223-4, 235, 241, 245, 276, 296-7, 316, 328, 330, 357, 427, 450, 461

N

Nadia, 295
 Nagpur, 12-3, 408, 445
 Naik, J.P., 110
 Nalanda, 307
 National Council for Teacher Education, 469
 NCERT (NIE), 39, 50, 71, 90-4, 96-7, 99, 101-3, 117-8, 121, 123-4, 152, 175-6, 190, 223, 235, 240, 244, 245, 250, 280, 283-5, 291, 293, 315-6, 318, 351, 375, 383, 390, 396, 398, 411, 418-9, 423-439, 450-1, 453-4, 459, 461, 465, 469, 472

NEFA, 235
 Nehru, 431
 NIBE (DBE), 50, 111-2, 114, 121, 125
 North Bengal, 137
 N.W.P., 13, 15, 20

O

Oppenheimer, 272
 Orissa, 61, 96, 98, 146, 197, 206-8, 357, 450
 Osmania, 137, 153, 156, 158-171, 174, 332, 408, 428

P

Panjab, 11-2, 15, 17, 19, 20, 23, 27-30, 33, 37, 46, 131, 135, 137, 146-7, 157-8, 160-1, 164-172, 178, 183-4, 234, 255, 294, 296, 308, 362, 408, 422, 427, 445
 Panjabi University, 137, 194, 308
 Parishad, 3
 Parliament of Science (American Ass.), 374
 Patiala, 178, 184, 308
 Patna, 14, 137, 153, 159-160, 162, 164-7, 169, 170-2, 174, 274, 316, 362, 427
 Planning Commission, 143, 452
 Plans, (Five Year), 35, 37, 89, 92, 94, 131, 150, 235, 244, 249, 303-4, 451-2
 Pondicherry, 235
 Poona, 5, 8, 33, 153, 160, 163, 166, 170-1, 175, 308, 328, 435, 445
 Poona College, 7, 20
 Portuguese, 4
 Prikasham Prasoon, 358
 Principals of Secondary Colleges, 474
 Project Method, 27

Q

Quick, 25
 Quit-India Movement, 32

R

Radha Krishnan S., 276
 Radha Krishnan Commission, 34, 183, 276
 Rajahmundry, 11-2, 14, 16,
 Raja Ram Mohan Rai, 431
 Rajasthan, 94, 98, 119, 137, 139, 156-161, 165-6, 170-2, 207, 255, 294, 331, 407
 Ramachandran, G., 201
 Rangoon, 35
 Rao Committee, 255

Rao, V.K.R.V., 120-1
 Ravishankar University, 137, 260
 Regional Colleges of Education, 293-4
 Review Committee on Education, 457
 Rig-Veda, 3
 Robbins Committee, 468
 Robertson, Major, 5
 Royal Commission on Agriculture, 27-8
 Russian, 349, 363

S

Sadhana School, 260-1, 274
 Sadler Commission, *See* Calcutta Commission Report
 Saidpet, 16, 206, 289
 Sapru Committee, 248
 Sardar Patel 'Varsity, 137, 260-1, 407
 Sargent Report, 34, 198, 248, 275, 410
 Saugar, 153, 157-9, 161, 164, 166-8, 170, 172, 260, 262, 264, 445
 Saxena, B.R., 437
 Scientific Manpower Committee, 251
 Secondary Edu. Commission, (Mudaliar Commission) 36-7, 109, 152, 183, 234, 248, 277, 323, 389, 408, 456
 Sehore Conference, 95, 100,
 Seminar Readings, 432
 Serampore, 4, 7
 Seshadari, T.R., 437
 Seventh National Seminar for Ele. Ed., 100
 Shah, K.T., 197
 Shivaji University, 137, 260
 Sidhanta, N.K., 326
 SIEs, 389-8, 49, 71, 89-107, 114, 117, 121, 189, 420
 Simla, 93
 Smith Lever Act, 279
 SNDT, 166, 170, 407
 Soviet Union (Russia), 197, 217
 Spence Trg. College, 33, 274
 Srimali, K.L., 199, 259
 Srinagar, 93-4, 99, 102, 106, 327
 State Boards, of Teacher Education, 452, 461
 State Council for Teacher Education, 38, 66, 460-1, 472
 State Department of Education, 459, 460
 St. Anne's Trg. School, 12
 St. Bede's College, 25
 S.S.C., 79
 Sully, 25
 Surat, 8

T

Tagore, 431
 Tamil Pandits, 362, 366
 Taradevi, 449

Teacher Education Journal, 454
Third Five Year Plan, 357, 374-5, 387
395, 399, 421, 446-7
Tirupati, 205, 331
Trichur, 357
Tripura, 67, 206-7, 214, 235
Trivandrum, 14, 331, 427, 454

U

Udaipur, 137
UGC, 124, 143, 147, 175-6, 356, 396,
435, 437, 441, 448, 451, 453-4, 456,
459, 461, 474
U.K., 26, 34, 65, 416
Ulama-i-akharat, 4
Ulamas, 4
UNESCO, 213, 373, 380, 384, 392, 399,
420, 435
UNICEF, 399
Union Territories, 146
U.P., 7, 11, 16-7, 19-22, 28, 30, 33, 46-7,
94, 131, 136, 146, 175, 189, 200,
205-8, 224, 235, 248, 274, 276, 291,
296, 309, 315-6, 362, 407
U.S.A., 26, 197, 230, 232, 279, 396, 426,
447, 468
U.S.A.I.D., 124, 253, 396, 399
U.S.S.R., 393, 397, 399
U.S.T.C.M., 36
Utkal, 137, 156, 158, 163, 165, 169-172,
408

V

Vallabhi, 307
Varanasi, 427

Vellore, 8
Venkateshwara, 135, 165, 170-1, 316,
408
Vepery Institute, 296
Verma, A.R., 437
Vidya Bhavan Trs' Trg. College, 33
Vikram, 137, 156, 158-9, 163-4, 169-
170
Vikramshila, 307
Vinaya Bhawan, 23
Vindhya Pradesh, 36

W

Waltair, 205, 330
Ward, 4
Wardha, 33, 196
Wardha Conference, 197, 199, 201
Wardha Scheme, 198
West Bengal, 11, 13-4, 16-7, 19, 20-1,
23, 46-7, 55, 61, 119, 135, 146, 205-
9, 235, 268, 291, 294, 296, 331, 357
Wiles, Kimbal, 232
Williamson, 5
Wilson (Mrs.), 6
Wood's Despatch, 7, 8, 273, 403

Y

YMCA, 276
YWCA, 276, 307

Z

Zenana teachers, 21
Ziller, 217

